UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

NOV 3 0 2012

MEMORANDUM

SUBJECT: **ENFORCEMENT ACTION MEMORANDUM** – Determination of Threat to Public Health, Welfare, or the Environment to Conduct a Non-Time-Critical Removal Action at the Southwestern Site Area, Sites 3, 4/5, and 6 of the Johns-Manville Corp. Superfund Site
Waukegan, Lake County, Illinois
Site ID# 05A5 Operable Units 3, 4, and 8

FROM: Matthew J. Ohl, Remedial Project Manager
Remedial Response Section #2

THRU: Joan Tanaka, Chief
Remedial Response Branch 1

Samuel Borries, Chief
Emergency Response Branch #2

TO: Richard C. Karl, Director
Superfund Division

I. PURPOSE

The purpose of this memorandum is to document the determination of an imminent and substantial threat to public health, welfare or the environment posed by contaminated soils at the Southwestern Site Area (Site) including Sites 3, 4/5, and 6, in Waukegan, Lake County, Illinois, and to document approval of the proposed non-time critical removal action for the Site. This action is necessary to abate or mitigate releases of hazardous substances that may present an imminent and substantial endangerment to public health and the environment posed by the presence of soils that are contaminated with hazardous substances as defined pursuant to Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This action is necessary to reduce the actual and potential exposure to the nearby human population and the food chain to hazardous substances from the Site. The action is expected to result in the removal and capping of contaminated materials at or near the surface which present a threat to trespassers or workers at the Site. Institutional controls to prohibit interference with caps and to prevent exposure to underlying contaminated materials are also a necessary component of this action.

Due to the availability of at least a six-month planning period before on-site activities must begin, the action is proposed as a non-time critical removal action. Certain potentially responsible parties (PRPs) characterized this Site by conducting an Engineering Evaluation/Cost Analysis (EE/CA) study. The U.S. Environmental Protection Agency (EPA) approved the EE/CA with modifications in a letter dated February 1, 2012. It is anticipated that this action will be conducted by PRPs with oversight by the EPA.

II. SITE CONDITIONS AND BACKGROUND

A. Physical Location

The Site is located along the southwestern perimeter of the former Johns Manville (JM) manufacturing facility at 1871 North Pershing Road to the west of Lake Michigan, Waukegan, Lake County, Illinois. These areas are part of the Johns Manville Corp. Superfund site (EPA ID # ILD005443544).

B. Site Description, Background and Previous Site Investigations and Response Actions

The Site includes properties owned by the Commonwealth Edison Company (ComEd) and properties adjacent to the JM facility in Waukegan, Lake County, Illinois, which are identified as Sites 3, 4/5, and 6. JM and ComEd entered into an Administrative Order on Consent (AOC) (VW-07-C-870) dated June 11, 2007 to conduct an EE/CA study for the Southwestern Site Area in response to the discovery of asbestos-containing waste materials (ACM) in soils in the areas identified as Sites 3, 4, 5 and 6, which are adjacent to the JM former manufacturing facility.

Site 3 is owned by ComEd and is located south of the Greenwood Avenue right-of-way near the southern property line of the former JM manufacturing facility. Pursuant to a license agreement with ComEd, JM used Site 3 as a parking lot for JM employees and invitees from the 1950s through approximately 1970. Asbestos-containing pipes were split in half lengthwise and used for curb bumpers on Site 3. Site 3 also contains miscellaneous fill material, some of which contains asbestos. The parking lot was taken out of service in approximately 1970 when the Amstutz Expressway was constructed.

In December 1998, Respondent JM discovered ACM at the surface on Site 3. JM removed surficial ACM and conducted sampling of the area which showed ACM at depths of at least three feet at Site 3. Surface and subsurface characterization of Site 3 was completed in 1998 by ELM Consulting LLC (ELM) and results were reported in a report dated December 1999. ELM sampling results are summarized in Table 2 and in Section 2.2.2 of the EE/CA. The northwest and northeast portions of Site 3 were not sampled during the ELM grid sampling event due to the presence of standing water. The ELM study identified these localized areas as wetlands. Levine Fricke (LFR) also conducted sampling in support of the EE/CA. During LFR's EE/CA sampling, these areas also exhibited areas of standing water, thereby precluding sample collection. The EE/CA sampling confirmed ACM in S3-50B and S3-40B. (See Figure 8 of the EE/CA). The

EE/CA confirmed ACM to depths of at least three feet at Site 3. The investigation results are discussed in Section 2.2.2 of the EE/CA.

Site 4/5 is on and adjacent to the western boundary of JM's former manufacturing facility in Waukegan, Illinois. Site 4/5 is located within the right-of-way owned by ComEd extending northward from the north end of the elevated roadway approach to Greenwood Avenue. Site 4/5 consists of an upland area and a low lying swale area between the upland area and a railroad right-of-way to the west. On October 26, 2000, JM personnel observed ACM at Site 4 during excavation activities related to the decommissioning of a nearby natural gas line. Pieces of ACM in the form of roofing materials, Transite™ sheeting and brake shoe materials were noted in the excavated soil. ACM exposed at the surface was picked up and disposed off-site at the Onyx Landfill located in Zion, Illinois but subsurface ACM remains. Site 4 was investigated concurrently with Site 5. Site 5 is located within a swale area of the ComEd right-of-way, which is on and adjacent to the western boundary of the former JM manufacturing facility in Waukegan, Illinois from Site 4 on the south to a point west of the north end of the pumping lagoon. Asbestos was discovered in the swale on Site 5 during investigations for a study prepared for the Waukegan Park District entitled "Waukegan Park District: An Evaluation of Offsite Asbestos and Air Pollutants and Their Potential Effect on Visitors to the Proposed Sports Complex in Waukegan, Illinois" dated March 7, 2002 (Waukegan Park District Study). According to the Waukegan Park District Study, a composite sample from the swale exhibited elevated asbestos concentrations. Both Sites 4 and 5 are located in the area adjacent to JM's western property line, and thus the two were combined for convenience.

The EE/CA study included visual ACM inspection, and Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM) analyses of soil samples collected from test pits within the expanded Site 4/5 investigation area, which indicated the presence of a variable thickness of ACM and/or asbestos fibers in soil above 0.25%. (See Figure 9A of the EE/CA). Visible ACM debris within the test pits included, but is not limited to, Transite™ pipe, roofing materials, fibrous process waste, wall board, brake liners, and flex-board. The investigation results for Site 4/5 are discussed in Section 2.3.2 of the EE/CA. The EE/CA investigation showed a variable thickness of ACM and/or asbestos fibers in soil above 0.25% in all but 4 of the 59 sampling rows. The EE/CA investigation showed occurrences of ACM and/or asbestos fibers greater than 4 feet below ground surface (bgs) encountered along the North Shore Sanitary District sewer main. (See Figure 9A of the EE/CA).

As part of the EE/CA, wetlands delineation for Site 4/5 was completed by Hey and Associates in a report dated January 7, 2009. (See Appendix K of the EE/CA). The field survey, conducted in October 7, 2008, determined that there were 4.09 acres of wetlands on Site 4/5.

Site 6 is adjacent to the JM former manufacturing facility on the shoulders of Greenwood Avenue and within the right-of-way of Greenwood Avenue in Waukegan, Illinois extending from the east end of Greenwood Avenue's elevated approach to Pershing Road on the west to the boundary of Site 2 on the east. Samples of this area were taken as part of the Waukegan Park District Study. Both shallow and deeper sample material from the Greenwood Avenue shoulder

showed elevated levels of concentrations of primarily chrysotile asbestos. Visible ACM debris included, but was not limited to, Transite™ pipe, roofing materials, fibrous process waste, wall board, brake liners, and flex-board. The investigation results are discussed in Section 2.4.2 of the EE/CA. The EE/CA investigation found that ACM either visible or detected by laboratory analysis was present in soil at 28 of 88 of the sample locations in Site 6. (See Table 4 and Figure 10 of the EE/CA). The EE/CA investigations found ACM down to 3 feet bgs at grid sample locations 02S through 09S and at certain sampling locations between 18N and 26N. ACM and/or asbestos fibers may extend at a depth below 3 feet bgs in these areas.

The area surrounding the Southwestern Site Area, Sites 3, 4/5, and 6 in Waukegan, Lake County, Illinois was screened for Environmental Justice (EJ) concerns using Region 5's EJ Assist Tool (which applies the interim version of the national EJ Strategic Enforcement Assessment Tool (EJSEAT 2011)). Census tracts with a score of 1, 2, or 3 are considered to be high-priority potential EJ areas of concern according to EPA Region 5. The Southwestern Site Area, Sites 3, 4/5, and 6 in Waukegan, Lake County, Illinois is in a census tract with a score of 9 (Attachment J). Therefore, Region 5 does not consider this Site to be a high-priority potential EJ area of concern. Please refer to the attached analysis for additional information. [1]

C. Streamlined Risk Evaluation

The streamlined risk evaluation is a general requirement of the EE/CA described in EPA Guidance document EPA 540-R-93-057. The results of the investigation indicate that ACM and/or asbestos fibers are present within the soil column at each Site, at depths ranging from the surface to lower than 5 feet in depth at some locations.

Exposure Route

The primary exposure route of concern is inhalation, where asbestos fibers from asbestos contaminated soil and damaged ACM may become airborne through human activity. Walking, biking and other physical disturbance of contaminated surface soils will result in airborne asbestos fibers and potential exposures to individuals involved in these activities. Of particular concern are digging and soil moving related to road repair, utility repair and any other construction activities on the sites. In addition to worker exposure, fugitive emissions from the sites may expose individuals off-site as well. Incidental ingestion from soils, and ingestion of asbestos fibers entrained in the mucous of the upper airways is a secondary exposure route, and likely of more concern in construction and utility workers.

Site Use

The current and anticipated future use of each Site is as follows:

• Site 3 is owned by ComEd and contains high voltage transmission lines. It consists of vegetated (uncut) open land that is unoccupied with no access restrictions. There are no plans to

1 Disclaimer: The values obtained from the EJSEAT 2011 are to be used for screening level analyses and should not be considered a definitive metric. EJSEAT 2011 is under development and review; therefore the values obtained from the tool should be considered interim.

change the current Site use and the area is zoned as General Industrial. Site 3 is currently being used by the following utilities:

*North Shore Gas Company: an underground high pressure gas line;
*City of Waukegan: 6-inch water line;
*ComEd: underground electric line;
*ComEd: fiber optic line;
*Nicor: gas transmission line; and
*AT&T: telephone cables.

• Site 4/5 is a ComEd right of way. It consists of vegetated (uncut) open land that is unoccupied with no access restrictions. There are no plans to change the current Site use and the area is zoned as General Industrial. Site 4/5 is currently being used by the following utilities:

*North Shore Sanitary District: sanitary sewer lines; and
*North Shore Gas Company: gas transmission line.

• Site 6 is owned by the City of Waukegan and serves as the shoulder to Greenwood Avenue. The city has recently added (within the past 4 years) approximately 2 to 3 feet of asphalt grindings to the original road elevation. The city has previously indicated that additional improvements to the roadway or adjacent shoulder areas may be completed in the future (*e.g.*, stormwater lines or surface paving); however, there are no current known plans to change the overall Site use as the Greenwood Avenue shoulder or right-of-way. The following utility lines are located on Site 6:

*AT&T: an underground phone cable;
*North Shore Gas Company: an underground high pressure gas line;
*City of Waukegan: 6-inch water line;
*ComEd: underground electric line; and
*ComEd: fiber optic line.

Potential Receptors
Potential receptors at each of the Sites are as follows:

• Potential receptor populations at Site 3 are (i) utility workers from either ComEd servicing their lines that cross the Site or from other utilities who maintain easements for their lines (see above), (ii) construction workers installing additional utilities in the future and (iii) anyone walking or biking across the field, i.e., trespassers.
• Potential receptor populations at Site 4/5 are (i) utility workers from either ComEd servicing their lines that cross the Site or from other utilities who maintain easements for their lines (i.e., North Shore Sanitary District); (ii) construction workers installing additional utilities in the future and (iii) anyone walking or biking along the railway right-of-way, i.e., trespassers.
• Potential receptor populations at Site 6 are (i) utility workers; (ii) road repair and maintenance and (iii) construction workers installing additional utilities in the future and the general public, as users of the roadway.

• Potential receptors as ACM and asbestos fibers come to the surface (freeze/thaw) at Sites 3, 4/5 and 6 and become airborne include residents approximately one-third to one-half of a mile to the west of these Sites, workers on or around each of Sites 3, 4/5, and 6, users of Greenwood Avenue, and wildlife in Illinois Beach State Park.

Potential Health Risks
Exposure to asbestos fibers via inhalation results in significant health effects including mesothelioma, lung cancer, asbestosis, thickening of the pleural lining around the lungs and pulmonary deficits. Exposures to soils containing asbestos fibers have been associated with all of these health effects including cancer.

Risk Evaluation
Air monitoring will be required for any disturbance of these areas because asbestos fibers are present in surface soils. The shoulders of Greenwood Avenue in Site 6 are not vegetated and are subject to physical disturbance from the general public as well as potential damage from vehicles, snow plows, salt trucks etc. Site 3 contains asbestos at less than 2 feet. Sites 3, 4/5 and 6 also contain utilities and these areas would be disturbed during maintenance or repair activities. Such damage or disturbance may result in the release of ACM and asbestos fibers. Adverse health risks are reasonably anticipated in the event that exposure occurs.

In frost-susceptible areas like Waukegan, stones and other large particles, such as broken scraps of asbestos, tend to move differentially upward through the soil with each freeze/thaw cycle. Thus, ACM and/or asbestos fibers currently covered with soil can, over time, reach the soil surface and become readily releasable to the air.

D. NPL Status

The areas addressed by this removal action are part of the JM Superfund Site, which was listed on the final NPL in 1983.

E. EE/CA Report

JM and ComEd submitted a draft EE/CA report to EPA dated April 4, 2011 that included the PRPs' recommendations for the removal action at the Site. EPA approved the EE/CA Report with modifications in a letter dated February 1, 2012. The April 4, 2011, EE/CA report and EPA's letter of February 1, 2012, together constitute the EE/CA report for the Site.

F. Current Site Conditions

The estimated volume of soil affected by ACM and/or asbestos fibers was determined from sampling results presented in Section 2 of the Report. Areas of asbestos occurrence are provided in Figure 8 (Site 3), Figure 9 (Site 4/5), and Figure 10 (Site 6) of the EE/CA Report. A summary of waste volumes identified is provided below:

- Site 3: 11,400 to 15,200 cubic yards of surface debris and localized ACM-affected soil
- Site 4/5: 16,700 to 25,000 cubic yards of ACM-affected soil
- Site 6: 3,200 to 7,500 cubic yards of ACM-affected soil

The detailed basis for soil volume estimates and spatial areas of ACM-affected soil is provided in Appendix L of the EE/CA Report.

G. State and Local Authorities Roles

1. State and Local Action to Date

   The Illinois EPA has actively participated in all stages of government response activities at the Site, including: (i) early site investigations, (ii) as support agency during the investigation of the sites, and (iii) as support agency during all phases of the recently concluded EE/CA process.

2. Potential for Continued State/Local Response

   EPA anticipates that Illinois EPA will continue its active involvement at the Site, assisting EPA in overseeing the design and construction of the selected removal action in a support agency role. The parties performing the removal action are expected to provide the Post Removal Site Control (PRSC)/Operation and Maintenance (O&M) measures necessary to ensure the success of the removal action and maintain compliance with ARARs.

III. THREAT TO PUBLIC HEALTH OR ENVIRONMENT; STATUTORY AND REGULATORY AUTHORITIES

Conditions at the Site present an imminent and substantial endangerment to public health, or welfare, and the environment, and meet the criteria for a non-time critical removal action provided for in the NCP, 40 C.F.R. § 300.415(b)(2).

A. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants

Human populations and animals are exposed or potentially exposed to pollutants associated with the Southwestern Site in the form of ACM and/or asbestos fibers in the soils at Sites 3, 4/5 and 6. Potential risks were documented in the investigations and analyses performed during the EE/CA process. The human health evaluation documented elevated levels of asbestos creating a potential risk from soils to users of Greenwood Avenue at Site 6 and trespassers and workers at Sites 3, 4/5 and 6. Due to the presence of asbestos in soils, adverse health risks are reasonably anticipated in the event that exposure occurs.

Exposure to asbestos fibers via inhalation results in significant health effects including

mesothelioma, lung cancer, asbestosis, thickening of the pleural lining around the lungs and pulmonary deficits. Exposures to soils containing asbestos fibers have been associated with all of these health effects including cancer.

B. High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate

This factor is present at the Southwestern Sites due to the existence of ACM and asbestos fibers in the surface and subsurface soils at the Sites 3, 4/5 and 6. Any activity that disturbs the soils has the potential to both release asbestos fibers from the soil and further damage the ACM releasing asbestos fibers into the air and soil. Asbestos migration onto adjacent properties may occur via airborne dust from the site or in water runoff. Friable asbestos is particularly susceptible to airborne migration. Furthermore, ACM and or asbestos fibers may be exposed in some areas of the Sites by erosion from rainfall events. When ACM is disturbed the materials may become damaged and asbestos fibers may separate and become airborne.

In frost-susceptible areas like Waukegan, stones and other large particles, such as broken scraps of asbestos, tend to move differentially upward through the soil with each freeze/thaw cycle. Thus, ACM and/or asbestos fibers currently covered with soil can, over time, reach the soil surface increasing asbestos contamination of surface soils and asbestos fibers may become readily releasable to the air.

C. Weather conditions that may cause hazardous substances or pollutants of contaminants to migrate or be released

This factor is present at the Southwestern Site due to the existence of ACM and/or asbestos fibers at or near the surface. Asbestos fibers may become airborne and migrate into adjacent areas during dry periods and/or periods of high winds or via surface runoff during heavy rains.

In frost-susceptible areas like Waukegan, stones and other large particles, such as broken scraps of asbestos, tend to move differentially upward through the soil with each freeze/thaw cycle. Thus, ACM and/or asbestos fibers covered with soil can, over time, reach the soil surface, increasing the contamination of the surface soils and asbestos fibers may become readily releasable to the air.

Therefore, conditions at the Site meet the following three criteria for a removal action as stated in 40 C.F.R. § 300.415 (b)(2): i) an actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants; ii) an actual or potential contamination of drinking water supplies; and iii) weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

IV. ENDANGERMENT DETERMINATIONS

Given the Site conditions, the nature of the hazardous substances, and the potential exposure pathways described above, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the removal action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS

The objective of this non-time critical removal action is to mitigate the imminent and substantial threats posed to human health from hazardous substances in soils at the Site that have the potential to migrate from the Site. Specifically, EPA expects the selected removal action to essentially eliminate the following: 1) the potential for releases of ACM or asbestos fibers to the air or water, 2) direct contact with ACM or asbestos fibers and 3) exposure of site workers and the general public to asbestos fibers from contaminated site soils.

Based on the nature and extent of contamination at the Site and on the removal action objectives, the EE/CA report dated April 4, 2011, evaluated four removal action alternatives. EPA modified and approved the EE/CA report in its letter of February 1, 2012. The removal action selected for the Site include all components of Alternative 5 as described in the EE/CA report, dated April 4, 2011, as modified and approved by EPA's letter of February 1, 2012, and minor changes based upon comments received during the public comment period.

Pursuant to the AOC, Respondents shall submit a Removal Action Work Plan to EPA for review and approval that implements the removal action set forth below within 120 days after receiving notice to proceed from the Remedial Project Manager.

Selected Removal Action (Alternative 5) - Soil Cover for Sites 3 and Site 4/5 with Environmental Covenants and Removal of ACM and asbestos fibers in Utility Easements; and Complete Removal of ACM and asbestos fibers for Site 6 and Northeast Corner of Site 3

1. Site 6: Modified Alternative 1. According to the EPA-approved schedule in the Removal Action Work Plan, Respondents shall:
   a. Within 180 days of EPA approval of the Work Plan, excavate all soil contaminated with ACM and/or asbestos fibers at Site 6 without limitation to depth including at a minimum, but not limited to the area identified as "Area of Excavation for ACM Affected Soil" and "Paving and Potential Subsurface ACM" in Figure 13 in the EE/CA. In non-utility areas, this excavation is anticipated to extend to a minimum depth of 3 feet bgs. Excavate all soil and sediment to a minimum width of 25 feet centered on any utility line (limited only by the edge of Greenwood Avenue to the extent it is demonstrated to provide a competent barrier to excavation) and to a minimum depth of two feet below the deepest utility line (and extending to the depth needed for protectiveness of utility workers at the

deepest utility line) with placement of a continuous barrier at the base and sides of the excavation to inhibit further excavation beyond the clean fill. Install and maintain warning signs or monuments at every point where a utility line passes under Greenwood Avenue. If during or after the soil excavation at Site 6, visual observation, samples from the sidewall, or other samples that may be collected indicate the presence of ACM or asbestos fibers under Greenwood Avenue, then warning signs or monuments will be installed and maintained every 100 ft. in length along Greenwood Avenue in all areas where ACM or asbestos fibers remains in place.

b. Post Excavation Sampling and Analysis. Conduct post excavation sampling and analysis to confirm that there are no remaining ACM or asbestos fibers in the soil at Site 6 after excavation. At a minimum, Respondents shall: i) collect and analyze soil samples for asbestos using Polarized Light Microscopy (PLM) CARB Level A (analytical sensitivity of 0.25% asbestos); ii) analyze 10% of the soil samples (from random interval depths) via Transmission Electron Microscopy (TEM) CARB Level B (analytical sensitivity of 0.1% asbestos); and iii) visually inspect to confirm that there are no remaining ACM or asbestos fibers in soil remaining after excavation.

c. Backfill excavated areas with clean, non-asbestos-containing material and restore any cover materials to original specifications described in paragraph 4 below.

d. Dispose of excavated material in an off-site landfill, or Respondents may seek approval from EPA for disposal of certain excavated materials (excluding sludges), in the JM industrial canal and/or pumping lagoon under the vegetated soil cover.

e. Institutional Controls by Owner of Greenwood Avenue. Greenwood Avenue was not sampled during the EE/CA Study. It is unknown if ACM or asbestos fibers are located under the Greenwood Avenue Paved Road Surface identified in Figure 13 of the EE/CA. Respondents shall obtain an environmental covenant pursuant to Illinois Environmental Covenant Act, 765 ILCS Ch. 122 substantially in the form of Attachment B and signed by the City of Waukegan. Respondents shall submit the executed environmental covenant to EPA as an attachment to the Work Plan. If this environmental covenant is not provided in accordance with this paragraph, the Removal Action Work Plan shall provide for an investigation and the full removal of any ACM or asbestos fibers that may remain under Greenwood Avenue to prevent its potential release during road or utility maintenance.

f. Confirmation Sampling and Analysis. Conduct confirmation sampling and analysis of surface soils located at 10S-30S, 09N-13N, 43N-49N, 56N-58N and 36S-54S of Site 6 to confirm that there are no ACM or asbestos fibers in the soil. At a minimum, Respondents shall collect and analyze soil samples for asbestos using TEM CARB Level B (analytical sensitivity of 0.1% asbestos).

2. Site 3: Modified Alternative 2. According to the EPA-approved schedule in the Removal Action Work Plan, Respondents shall:
   a. Within 90 days of approval of the Work Plan, excavate soil in northeast portion of Site 3 (approximately 0.14 acres) identified as the limited excavation area shown in Figure 15 of the EE/CA to remove all ACM and asbestos fibers (estimated to a depth of 4 feet) and dispose of excavated materials in an off-site landfill in full compliance with the off-site rule, or for excavated materials, excluding sludges, subject to EPA approval, in the industrial canal and pumping lagoon under the vegetated soil cover. ComEd Fiber Optic Cable is located in this area and special provisions may be required to support or remove/relocate this utility to enable complete removal of ACM and asbestos fibers near this utility.
   b. Utility Areas: i) Within 90 days of approval of the Work Plan, excavate soil and sediments contaminated with ACM and/or asbestos fibers to a minimum depth of 2 feet below each utility line and extending to the depth requested by the owner of the utility line with placement of a continuous barrier at the base and sides of the excavation to inhibit further excavation and/or exposure beyond the clean fill and a minimum width of 25 feet centered on each utility line and clean backfill to provide a clean corridor for utility maintenance on Site 3.
   ii) Subject to review and approval by EPA, additional excavation and removal may be performed to achieve complete removal of ACM and asbestos fibers, thereby potentially reducing the size of the vegetated soil cover subject to approval by EPA.
   iii) Alternate Compliance Option: Respondents may in lieu and instead of complying with the requirements set forth in 2.b.i, abandon the utility lines and relocate them if: 1) Respondents provide a written request and obtain written approval from EPA prior to the deadline for submittal of the Work Plan; and 2) Respondents include as part of the Work Plan a signed voluntary subrogation agreement substantially in the form of Attachment E, whereby the utility agrees to abandon the line and subrogate its property interest to the Environmental Covenant required by paragraph 2.f. If Respondents elect this alternate compliance option, Respondents shall construct new lines of appropriate materials and have sufficient capacity to replace the existing lines and be properly connected to prevent any significant interruption in service. The new lines shall be placed either outside of the area contaminated with ACM and/or asbestos fibers to bypass this area, or within fully enclosed utility vaults that eliminate the need for excavation during repair or maintenance activities. Upon certification that the new lines are operational and functional, Respondents shall properly abandon the old utility lines in place.
   c. Post Excavation Sampling and Analysis. Conduct post excavation sampling and analysis to confirm that there are no remaining ACM or asbestos fibers in soil or sediment within either the northeast portion of Site 3 shown in Figure 15 of the EE/CA or within each utility corridor located at Site 3. At a minimum, Respondents shall: i) collect and analyze soil and sediment samples for asbestos using PLM CARB Level A (analytical sensitivity of 0.25% asbestos); ii) analyze

10% of the samples (from random interval depths) via TEM CARB Level B (analytical sensitivity of 0.1% asbestos); and iii) visually inspect to determine the presence of any remaining ACM or asbestos fibers after excavation in soil and sediments including adjacent areas.

d. Dispose of excavated material in a licensed off-site landfill, or Respondents may seek approval from EPA for disposal of certain excavated materials (excluding sludges), in the JM industrial canal and/or pumping lagoon under the vegetated soil cover.

e. Place and maintain the vegetated soil cover as described in paragraph 4 below, in those areas of Site 3 where ACM or asbestos fibers remain in place, including without limitation, the area marked as Vegetated Soil Barrier with Vegetative Surface in Figure 15 of the EE/CA unless otherwise approved by EPA. Enroll the areas, including without limitation, the area marked as Vegetated Soil Barrier with Vegetative Surface area in Figure 15 in the State One Call Program (currently the Joint Utility Locating Information for Excavators (JULIE).

f. Institutional Controls by Owner of Site 3: The Respondent Owner of Site 3 shall execute and record an environmental covenant pursuant to the Illinois Environmental Covenants Act, 765 ILCS Ch. 122 substantially in the form of Attachment C. The Respondent Owner shall obtain title insurance, which shows the land affected by the Environmental Covenant to be free and clear of all prior liens and encumbrances (except when EPA waives the release or subordination of such prior liens or encumbrances)

g. Reroute, pipe, or remove surface water as needed to support this removal action as set forth in the Work Plan approved by EPA.

h. Install and maintain security fencing with warning signs every 100 feet and at all gates completely surrounding all areas where ACM or asbestos fibers remain in place.

i. Long term operation and maintenance (O&M) of the vegetated soil cover. Respondents shall include in the Work Plan a schedule for submittal of an O&M Plan to EPA for review and approval. The O&M Plan shall provide for monitoring of the cap for integrity as well as non-native and invasive species periodically and taking all necessary actions during the operations and maintenance period. The O&M period is for a minimum of 30 years beginning when construction is completed.

3. Site 4/5: Modified Alternative 2. According to the EPA-approved schedule in the Removal Action Work Plan, Respondents shall:

a. i) North Shore Sanitary District Utility Area of Site 4/5: A) Within 180 days following EPA approval of the Work Plan, Respondents shall excavate soil contaminated with ACM and/or asbestos fibers to a minimum depth of 2 feet below the North Shore Sanitary District (NSSD) sewer lines and extending to the depth requested by the owner of the utility lines with placement of a continuous barrier at the base and sides of the excavation to inhibit further excavation beyond the clean fill and a minimum width of 25 feet centered on the utility lines and

backfill to provide a clean corridor for utility maintenance on Site 4/5. Additional excavation and removal may be performed to achieve complete removal of ACM and asbestos fibers, thereby potentially reducing the size of the vegetated soil cover subject to approval by EPA.

B) Alternate Compliance Option: Respondents may in lieu and instead of complying with the requirements set forth in 3.a.i.A, abandon the existing NSSD sewer lines on Site 4/5 and relocate them if: 1) Respondents provide a written request and obtain written approval from EPA prior to the deadline for submittal of the Work Plan; and 2) Respondents include as part of the Work Plan a signed voluntary subrogation agreement substantially in the form of Attachment E, whereby NSSD agrees to abandon the line and subrogate its property interest to the Environmental Covenant required by paragraph 3.h. If Respondents elect this Alternate Compliance Option, within 180 days following EPA approval of the Work Plan, Respondents shall construct sanitary sewer lines either outside of the area contaminated with ACM and/or asbestos fibers to bypass this area, or within fully enclosed utility vaults that eliminate the need for excavation during repair or maintenance activities. The new sewer lines must be constructed of appropriate materials and have sufficient capacity to replace the existing NSSD sewers and be properly connected to the NSSD sewer lines to prevent any significant interruption in service. Upon certification that the new sewer lines are operational and functional, Respondents shall properly abandon the old sewer lines in place.

ii) North Shore Gas Company Utility Area of Site 4/5: Within 180 days after EPA approval of the Work Plan, either excavate and remove soil contaminated with ACM and/or asbestos fibers to a minimum depth of 2 feet below the North Shore Gas Company line and a minimum width of 25 feet centered on the utility line to provide a clean corridor for utility maintenance or disconnect and properly abandon the North Shore Gas Company natural gas transmission line to the south of Site 4/5 at Greenwood Avenue and submit a subrogation agreement substantially in the form of Attachment E (executed by Respondents and North Shore Gas) as an attachment to the Work Plan.

b. Post Excavation Sampling and Analysis: If EPA requires soil and/or sediment excavation at Site 4/5, conduct post excavation sampling and analysis to confirm clean utility corridors. At a minimum, Respondents shall: i) collect and analyze soil and sediment samples for asbestos using PLM CARB Level A (analytical sensitivity of 0.25% asbestos); ii) analyze 10% of the samples (from random interval depths) via TEM CARB Level B (analytical sensitivity of 0.1% asbestos); and iii) visually inspect to determine the presence of any remaining ACM or asbestos fibers after excavation in soil and sediments including adjacent areas.

c. Backfill any excavation with clean non-asbestos containing material and restore any cover materials to original specifications described in paragraph 4 below.

d. Dispose of excavated material in an off-site landfill, or Respondents may seek approval from EPA for disposal of certain excavated materials (excluding sludges), in the JM industrial canal and/or pumping lagoon under the vegetated soil cover.

e. Place and maintain the vegetated soil cover as described in paragraph 4 below over areas where ACM or asbestos fibers may remain in place, including without limitation, the area marked for a vegetated soil barrier in Figure 19 of the EE/CA. Also fill wet areas to allow for cap construction above seasonal high water level to prevent potential erosion in the long term. Enroll the areas, including without limitation, the area marked for a vegetated soil barrier in Figure 19 of the EE/CA in the State One Call Program (currently the JULIE).

f. Develop and submit a sediment and erosion control plan.

g. Submit a detailed design, monitoring and maintenance plan, with specified performance standards, for EPA review and approval, for restoring the 4.09 acres of emergent wetlands that may be impacted as part of the Work Plan that meets the requirements of 40 C.F.R. § 230.94(c)(2)-(14).

h. Institutional Controls by Owner of Site 4/5. The Respondent Owner of Site 4/5 shall execute and record an environmental covenant in substantially the form of Attachment D. The Respondent Owner shall obtain title insurance, which shows the land affected by the Environmental Covenant to be free and clear of all prior liens and encumbrances (except when EPA waives the release or subordination of such prior liens or encumbrances)

i. Install and maintain security fencing with warning signs every 100 feet and at all gates completely surrounding all areas where ACM or asbestos fibers remain in place.

j. Long term O&M of the vegetated soil cover. Respondents shall include in the Work Plan a schedule for submittal of an O&M Plan to EPA for review and approval. The O&M Plan shall provide for monitoring of the cap for integrity as well as non-native and invasive species periodically and taking all necessary actions during the operations and maintenance period. This period is at least 30-years and it starts when construction is completed.

4. Vegetated Soil Cover for Sites 3 and 4/5

A 24-inch, two-layer cover was selected for the JM Superfund Site in the 1987 ROD. The cover thickness was designed to ensure that, on the average, the frost layer does not enter the waste materials more than 10 times per century. This minimizes the freeze/thaw effects because no particle movement occurs when the frost layer does not enter the waste materials. In addition, calculations made by JM's consultant indicate that the 24-inch, two-layer cover would prevent asbestos from reaching the surface and becoming releasable to the air for well in excess of 100 years. Unless an alternative cover design with a thickness of greater than 24 inches and equivalent or better frost protection is approved by U.S. EPA, Vegetated Soil Cover shall mean, at least 6 inches of non-asbestos containing sand beneath compacted non-asbestos-containing soils with the following minimum composition: a geotextile layer overlain by 15 inches of native clayey soil, overlain by 3 inches of topsoil and a vegetation cover. Clean fill from the Borrow Pit or currently stockpiled at the Johns-Manville Site (unused soil from Zion) may be used if it meets the requirements for the vegetated soil cover including that it does not contain detectable levels of asbestos fibers using TEM CARB Level B (analytical

sensitivity of 0.1% asbestos). Non-asbestos containing sandy soils are expected to exist at the Site that, if located or placed above surrounding grade, may provide the benefits (e.g., drainage and mitigation of particle migration) of the six-inch layer of sand required at the base of the vegetated soil cover described in the 1987 Record of Decision (ROD) for the JM NPL Site. In any areas where at least 6 inches of non-asbestos containing sand does not exist above surrounding grade, at least 6 inches of such sand shall be provided prior to placing the geotextile layer of the vegetated soil cover. Additional grading material or alternative cover materials may be required as part of the vegetation cover to ensure proper drainage and to support an appropriate mix of local, native plant species. These native species are anticipated to include heavy hydroseeding with little bluestem (Schizachyrium scoparium). The seed must be of midwest genotype preferably from sources within a few hundred miles of the Site. If requested by EPA, Respondents shall apply a secondary seeding to provide root growth between the bunch grass for erosion control, thereby potentially reducing maintenance requirements after the excavation work has been completed. If approved by EPA, other plant species may need to be added during the secondary seeding to control erosion, but no invasive plants including, but not limited to, crown vetch, sweet clover, and spotted knapweed shall be used.

5. Respondents shall submit and implement an EPA-approved transportation plan as part of the Removal Action Work Plan that will ensure truck traffic is directed to and from the sites during construction in a safe and orderly manner. The transportation plan shall include a street sweeper to clean streets regularly to remove soil that is left behind on the roads by trucks transporting material in and out of the Site.

The other removal alternatives considered for the Southwestern Site are described in detail in the EE/CA Report. They included:

- Alternative 1: Complete Removal
- Alternative 2: Soil Barrier
- Alternative 3: Hybrid Remedy
- Alternative 4: Alternate Soil Barrier Remedy (Site 3 only)

VI. EVALUATION CRITERIA

EPA believes the selected remedy provides the best balance of tradeoffs with respect to the balancing and modifying criteria. The decisive factors that led to selecting the remedy include: 1) the high level of protectiveness in a relatively short time frame; 2) the high level of compliance with ARARs; 3) the excellent long-term effectiveness while mitigating risks posed during implementation; 4) the expected high level of supporting agency and community acceptance; and 5) the reasonable present worth and operation and maintenance costs given the risk reduction to be achieved compared to the other alternatives.

A. Overall Protectiveness of Human Health and the Environment

The selected removal action will protect human health and the environment by removing asbestos or covering any remaining asbestos to reduce the potential for exposure. Removal may be more protective in the long-term because it does not rely on the maintenance of covers or compliance with institutional controls. Complete removal is required at Site 6 because the ACM or asbestos fibers are located in the public right-of-way for Greenwood Avenue. There is no reliable way to prevent access and maintain a vegetative cover over the ACM or asbestos fibers located in Site 6. Any vegetative cover and fencing placed at the edge of Greenwood Avenue would be subject to potential damage from vehicles, snow plows, salt trucks, etc. Sites 3, 4/5, and 6 also contain utilities and any cover would be disturbed during maintenance or repair activities. Such damage or disturbance may result in the release of ACM and/or asbestos fibers. Dust from the disturbed ACM and/or asbestos fibers can be hazardous when inhaled. Exposure to asbestos fibers via inhalation results in significant health effects including mesothelioma, lung cancer, asbestosis, thickening of the pleural lining around the lungs and pulmonary deficits. Exposures to soils containing asbestos fibers have been associated with all of these health effects including cancer. Sites 3 and 4/5 include non-utility containing areas where access to ACM or asbestos fibers could be controlled with proper engineering controls supplemented by institutional controls if, and only if, Respondents can establish such controls promptly in accordance with the requirements of the selected removal action.

B. Long Term Effectiveness and Permanance and Contribution to Remedial Performance

The selected removal action will significantly reduce any long-term threats posed through ingestion, inhalation and direct contact with the hazardous substances, which are attributable to the Site. Long-term effectiveness in areas where ACM or asbestos fibers remain in place is reduced by the presence of utilities that require maintenance and repair, especially those that may require immediate action due to damage or failure. Utilities such as natural gas, electric, communications, water and sewer in Sites 3, 4/5, and 6 require immediate access and repair to respond to leaks or damaged lines. Time-critical excavation necessary to respond to an emergency situation such as a gas leak or a damaged electrical line would be likely to result in the potential release of ACM and asbestos fibers. In the event of a breach or other loss of integrity, pressurized underground utilities also have the potential to force overlying soils to the surface resulting in the potential release of ACM and asbestos fibers. Therefore, excavation of clean corridors for all such utilities must be provided as soon as possible to prevent the potential release of ACM and asbestos fibers. The replacement of a sewer line such as the one in Site 4/5 is likely to require significant advanced planning and thus additional time has been provided for this action. Furthermore, rerouting or reconfiguration of the sewer line may also reduce the potential for the release of ACM or asbestos fibers.

Performance monitoring of the various components of the remedy will allow EPA to evaluate the potential need for any further remedial investigation or remedial action. Furthermore, if the selected removal action operates as expected, it will adequately address the threats described in

Section III above, and EPA would not expect future remedial action to be necessary. To the extent additional action would be necessary at the Site, however, based upon available information, the selected removal action will not impede such future response actions. Given that the removal action may result in waste left in place that will not allow unrestricted use and unlimited exposure, EPA intends to conduct discretionary five-year reviews of the selected removal action at the Site. Air monitoring including activities equivalent to activity based sampling may be necessary to properly monitor the response action and support the five-year reviews. EPA may conduct these five-year reviews as part of the site-wide five year reviews.

C. Reduction of Toxicity, Mobility or volume Through Treatment

Treatment is not a component of the selected removal action. However, removal and proper disposal or placement of a properly designed cover is expected to reduce the mobility of asbestos fibers.

D. Short Term Effectiveness

There will be some short-term exposure risk during the implementation of the selected removal action. Proper personal protective equipment and waste management practices will be employed to mitigate this risk. Complete removal through excavation may appear to have the potential for higher short-term risk; however, the grading of ACM and asbestos contaminated soils necessary for placement of a cover will also result in increased short-term risk.

E. Implementability

The selected removal action involves complete removal of ACM and asbestos fibers at Site 6 and in utility right of ways. If the unused gas line can be properly abandoned at Greenwood Avenue to the south of Site 4/5, the sewer lines rerouted around Site 4/5, and the required environmental covenants are implemented, Site 4/5 may be covered with the Vegetated Soil Cover. There is no reliable way to prevent access and maintain a two-foot cap with vegetation over the ACM and asbestos fibers at Site 6. The selected removal action is technically and administratively feasible. Both excavation and covering of ACM and asbestos fibers have been conducted at the JM Site. Coordination with the City of Waukegan and ComEd should be easily carried out. The necessary services and materials are readily available within Waukegan and surrounding areas. State or community concerns are not expected to result in significant changes to the selected removal action. Complete removal is relatively simple. Properly trained workers are readily available and there are existing agreements in place to facilitate coordination with the various utilities. Relocation of utilities for construction projects occurs frequently and doesn't overly complicate the removal process provided proper location of the utilities and coordination with the owners is done in advance. Covering of ACM and asbestos fibers could be implementable in limited areas; however, it is unknown whether the necessary Institutional Controls could be properly implemented, monitored, and enforced for all of the utilities present at the Sites. Responding to emergencies including, but not limited to gas leaks, may require prompt access to Sites.

F. Cost

The estimated cost for the selected removal action (Alternative 5) is $6,448,849 to $10,018,701. The upper end of this range of costs is based upon the potential additional cost involved with creating clean utility corridors or relocating the utilities that run through Sites 3 and 4/5. (See the cost estimates in the administrative record for this Enforcement Action Memorandum). The construction cost for Alternative 5 is estimated to be $6,082,852 to $9,652,704. The long term operation and maintenance cost for Alternative 5 is estimated to be $365,997. These costs are based on the following costs for each of the sites:

Site 6 – construction $1,868,790, annual O&M $0
Site 4/5 - construction $2,508,366 to $5,676,292, annual O&M $14,897, and net present worth of O&M $184,860; and
Site 3 - construction $1,705,696 to $2,107,622, annual O&M $14,597, and net present worth of O&M $181,137

Alternative 5 is compliant with ARARs and is more effective and protective than other alternatives that would leave asbestos containing material in place in utility areas and areas accessible to the public at the Site. Alternative 5 is cost effective and its costs are proportional to its overall effectiveness.

G. Applicable or Relevant and Appropriate Requirements

Pursuant to Section 300.415 (j) of the NCP, the selected removal action will comply with federal and/or, where more stringent, State applicable or relevant and appropriate requirements (ARARs).

1. State of Illinois Solid Waste Standards (35 IAC 807.305)

Specifications related to soil cover design are described in 35 IAC 807.305. These rules are applicable to all areas of the Southwestern Area Site where deposits of ACM or asbestos fibers would remain in place following the excavation work as part of the selected remedy. This soil cover shall be designed and implemented to achieve compliance with the state capping requirements for landfills in 35 IAC 807, which the Illinois EPA has identified as a State ARAR.

2. Executive Order 13112

Executive Order 13112 seeks to prevent the introduction of invasive species. The soil cover for Sites 3 and 4/5, disturbed areas and any wetland restoration shall be vegetated to mitigate erosion using native plant species consistent with the nearby nature preserve and approved by EPA. This vegetation shall be maintained consistent with the intent of Executive Order 13112.

3. National Emissions Standards for Hazardous Air Pollutants for Asbestos (40 C.F.R. Part 61)

Federal standards for inactive asbestos waste disposal sites are described in 40 C.F.R. § 61.151, which requires no visible emissions or a cover over an inactive waste disposal site that contains ACM. 40 C.F.R. § 61.151(4)(d) requires approval by the Administrator if there will be disturbance of an inactive waste disposal site containing ACM and off-site disposal for any excavated ACM. For inactive waste disposal sites containing ACM, 40 C.F.R. § 61.151(4)(e) requires implementation of title documents that run with the land and notify prospective purchasers in perpetuity that the property is subject to the Asbestos NESHAP. Alternative 5 complies with 40 C.F.R. § 61.151 because it requires a vegetative cover over the inactive waste disposal areas of the Southwestern Site. Alternative 5 also requires environmental covenants for the inactive waste disposal areas of the Southwestern Site, which comply with 40 C.F.R. § 61.151(4)(e).

Under 40 C.F.R. § 61.141, "facility" is defined to include inactive asbestos waste disposal sites and "renovation" is defined to mean altering a facility or one or more facility components in any way. 40 C.F.R. § 61.145 requires removal of all regulated asbestos-containing material from a facility being renovated "before any activity that would break up, dislodge, or similarly disturb the material." Existing easements on the asbestos waste disposal areas of the JM Southwestern Site authorize entry for excavation, maintenance and other activities that could alter the asbestos waste disposal areas. Removal of asbestos-containing material prior to any activity that would break up, dislodge, or similarly disturb the material is applicable and relevant and appropriate to utility easement areas. Alternative 5 complies with this requirement because ACM is or will be removed in areas that may become disturbed, such as utility rights of way.

4. State of Illinois Emissions Standard for Asbestos (35 IAC 228)

Alternative 5 and Removal Action Work Plan will comply with the air emissions standards set forth in 35 IAC 228.

5. Clean Water Act Section 404

Clean Water Act Section 404 regulates the discharge of dredged or fill material into waters of the United States, including wetlands, through a permit process. While CERCLA remedies are exempt from permit requirements, the substantive requirements of these rules apply to the wetlands area of Site 4/5. Compensatory mitigations must be provided in accordance with the Section 404(b)(1) guidelines, 40 C.F.R. § 230.10(a). Superfund policy is to require a minimum of one acre of wetlands mitigation for each acre of wetland filled. (See "Considering Wetlands at CERCLA Sites" OSWER 9280.0-03). Alternative 5 may require capping of a wetlands area in Site 4/5 and in that case 4.09 acres of wetlands will need to be restored. The Federal Mitigation Rule requires that mitigation plans include the following fundamental components: objectives; site selection

criteria; site protection instruments (e.g., conservation easements); baseline information (for impact and compensation sites); credit determination methodology; a mitigation work plan; a maintenance plan; ecological performance standards; monitoring requirements; a long-term management plan; an adaptive management plan; and financial assurances. (*Compensatory Mitigation for Losses of Aquatic Resources; Final Rule* 40 C.F.R. § 230.94(c)(2-14)). Also a sediment and erosion control plan will be incorporated into the Removal Action Work Plan.

6. Executive Orders 11988/11990 - Protection of Floodplains/Wetlands and the Fish & Wildlife Coordination Act, 16 U.S.C. § 661 *et seq.*

The Removal Action Work Plan and construction activities will comply with the provisions of Executive Orders 11988/11990, which require action to be taken to mitigate the impacts on wetlands. For construction activities impacting an area greater than one acre within Site 4/5, a sediment and erosion control plan will either be incorporated into the Removal Action Work Plan, or prepared as a separate document meeting the requirements of Title 35 IAC Subtitle C, Chapter 1 and Lake County Illinois guidance.

To Be Considered

765 ILCS Ch. 122 Illinois Uniform Environmental Covenants Act (UECA) authorizes implementation of environmental covenants that arise under an environmental response project. Alternative 5 includes implementation of environmental covenants pursuant to UECA on Sites 3 and 4/5.

Air Monitoring

As there is no defined ambient air quality standard for airborne asbestos, air monitoring results collected during the removal action will be compared with 10% of the OSHA time-weighted average (TWA) personal exposure limit (0.1 fibers per cubic centimeter) for asbestos (29 C.F.R. § 1910.1001).

VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Delayed action or non-action would result in an increased likelihood of dermal contact, ingestion, and inhalation of hazardous substances by the human population accessing the Site or future users of the Site. Delayed action will also result in an increased likelihood of increased amounts of ACM and/or asbestos fibers being carried off-site.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues for the Site.

IX. ENFORCEMENT

See Enforcement Confidential Memorandum Attachment.

X. CHANGES TO PROPOSED PLAN

For Site 4/5, the proposed plan required an environmental covenant whereby a clean corridor for the North Shore Sanitary District would be achieved during NSSD's next large maintenance project. The selected recommended removal action accelerates the timing of the removal of ACM and asbestos fibers to create a clean utility corridor at the NSSD utility line by a date certain –180 days after approval of the Work Plan. The recommended alternative also allows an alternative approach of relocating the sewer line at Site 4/5 and utility lines at Site 3 and abandoning existing lines under a vegetative cover. For Sites 3 and 4/5 where utilities are present, to improve long term risk protectiveness EPA has added the placement of a barrier to inhibit excavation beyond the clean fill and the option of relocating the utility lines into fully enclosed utility vaults such that no excavation will be necessary to access the utility lines for repair or maintenance activities. These changes are in response to concerns raised during and after the public comment period and could have been reasonably anticipated based on the proposed removal of asbestos to create clean utility corridors for other utilities and the proposed abandonment of the North Shore Gas line at Site 4/5 and information in the administrative record. The cost range for the response action has been expanded from that in the proposed plan as additional options including relocating utility lines were added to provide greater flexibility to the parties implementing the response action. For more information on these changes and the related costs, please see the detailed cost estimates in the administrative record for this decision.

XI. RECOMMENDATIONS

As noted in Section II. C, the PRPs conducted a streamlined risk evalaution as part of the EE/CA report to evaluate the actual or potential threats to human health and the environment posed by the Site. When evaluating the most appropriate removal alternative(s) for a Site, an EE/CA must consider the criteria of effectiveness, implementability, and cost. Based upon the EE/CA support sampling results and the streamlined risk evaluation, EPA believes the removal action selected in this Enforcement Action Memorandum will be effective because it will significantly reduce potential exposure to contamination and isolate the waste to prevent direct contact, inhalation and incidental ingestion of contaminants. Finally, the cost of implementing the removal action is reasonable when compared to the associated reduction in risk.

This decision document presents the selected removal action for the Southwestern Site Area including Sites 3, 4/5, and 6, Waukegan, Illinois, developed in accordance with CERCLA, as amended, and it is not inconsistent with the NCP. This decision is based on the Administrative

Record for this Site. (see Attachment J) Conditions at the Site meet the criteria under 40 C.F.R. § 300.415(b)(2) of the NCP for a removal action, and I recommend your approval of the proposed non-time critical removal action. You may indicate your decision by signing below:

APPROVE: Richard C Karl

Richard C. Karl, Director
Superfund Division

DISAPPROVE: _____

Richard C. Karl, Director
Superfund Division

Attachments:

A. Map of Southwestern Site
B. Environmental Covenants – Greenwood Avenue
C. Environmental Covenant – Site 3
D. Environmental Covenant – Site 4/5
E. Sample Subrogation Agreement
F. Soil Management and Health and Safety Plan
G. Responsiveness Summary
H. Enforcement Confidential Memorandum
I. Administrative Record Index
J. Environmental Justice Analysis

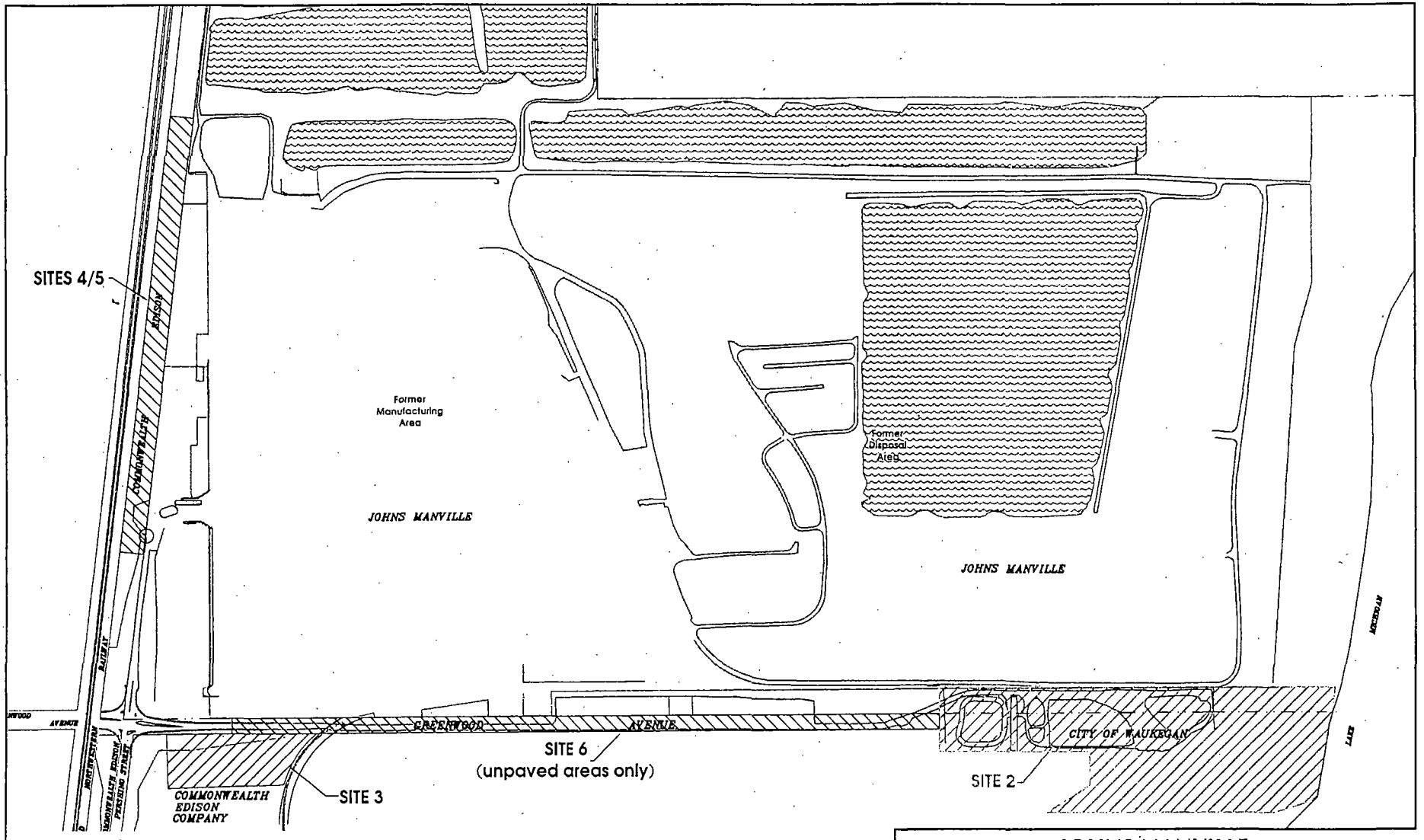
cc: S. Fielding, EPA 5104A
V. Darby, U.S. Department of Interior, w/o Enf. Addendum

BCC PAGE HAS BEEN REDACTED

NOT RELEVANT TO SELECTION OF

REMOVAL ACTION

ATTACHMENT A



T:\Clients\Johns Manville\009-07992-00 Waukegan\Southwestern Sites AOC\Drawings\Site3-4-5-6-Map.dwg

JOHNS MANVILLE

Southwestern Site Area
Sites 3, 4, 5, and 6
Waukegan, Illinois

LFR

Attachment A

ATTACHMENT B

Environmental Covenant – City of Waukegan re: Greenwood Avenue

[space above reserved for recording information]

This instrument was prepared by:

Name:
Address:

Please return this instrument to:

Name:
Address:

ENVIRONMENTAL COVENANT

1. This Environmental Covenant is made this _____ day of _____, 20__, by and among City of Waukegan (Grantor) and the Holders/Grantees further identified in paragraph 3 below pursuant to the Uniform Environmental Covenants Act, 765 ILCS Ch. 122 (UECA) for the purpose of subjecting the Property to the activity and use limitations described herein.

2. Property and Grantor.

A. Property: The real property subject to this Environmental Covenant is located in Lake County, Illinois and is legally described in Appendix A, hereinafter referred to as the "Property". The county parcel number for this Property is _____.

B. Grantor: City of Waukegan is the current fee owner of the Property and is the "Grantor" of this Environmental Covenant. The mailing address of the Grantor is _____.

3. Holders (and Grantees for purposes of indexing).

A. Illinois EPA is a Holder (and Grantee for purposes of indexing) of this Environmental Covenant pursuant to its authority under Section 3(b) of UECA. The mailing address of the Illinois EPA is 1021 N. Grand Avenue East, P.O. Box 19276, Springfield, IL 62794-9276.

B. The City of Waukegan is a Holder (and Grantee and Grantor for purposes of indexing) of this Environmental Covenant pursuant to UECA. The mailing address of the City of Waukegan is _____. Regardless of any future transfer of the Property, the City of Waukegan shall remain a Holder of this Environmental Covenant. City of Waukegan is to be identified as both Grantee and Grantor for purposes of indexing.

C. Commonwealth Edison is a Holder (and Grantee for purposes of indexing) of this Environmental Covenant pursuant to UECA. The mailing address of Commonwealth Edison is _____.

D. Johns Manville is a Holder (and Grantee for purposes of indexing) of this Environmental Covenant pursuant to UECA. The mailing address of Johns Manville is 717 17th Street, Denver, CO 80202.

4. Agencies. The Illinois EPA and the U.S. EPA are "Agencies" within the meaning of Section 2(2) of UECA. The Agencies have approved the environmental response project described in paragraph 5 below and may enforce this Environmental Covenant pursuant to Section 11 of UECA.

5. Environmental Response Project and Administrative Record.

A. This Environmental Covenant arises under an environmental response project as defined in Section 2(5) of UECA.

B. The Property is currently a paved area of Greenwood Avenue. Asbestos-containing material was found on the shoulders of Greenwood Avenue in the area demarcated on Appendix B, which is adjacent to the Property. The area in Appendix B is part of the Johns Manville Southwestern Site Area ("Site"), which is undergoing environmental remediation pursuant to Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"). In an Action Memorandum, the U.S. EPA Region 5 Division Director selected a removal action for the Southwestern Site that provided, in part, for the placement of land use restrictions for the Southwestern Site. The extent of asbestos-containing material underneath the paved areas on the Property identified in Appendix A has not been determined. Activity and use limitations are required under the plan for environmental remediation approved by the Agencies at the Site. This Environmental Covenant is required by the removal action.

C. Grantor wishes to cooperate fully with the Agencies in the implementation, operation, and maintenance of all response actions at the Site.

D. The Administrative Record for the environmental response project at the Site (including the Property) is maintained at the U.S. EPA Superfund Record Center, 7th Floor, 77 West Jackson Blvd, Chicago, Illinois 60604.

6. Grant of Covenant. Covenant Runs With The Land. Grantor creates this Environmental Covenant pursuant to UECA so that the Activity and Use Limitations and associated terms and conditions set forth herein shall "run with the land" in accordance with

Section 5(a) of UECA and shall be binding on Grantor, its heirs, successors and assigns, and on all present and subsequent owners, occupants, lessees or other person acquiring an interest in the Property.

7. **Activity and Use Limitations.** The following Activity and Use Limitations apply to the use of the Property:

No excavation under Greenwood Avenue: The extent of asbestos contamination associated with the soils underneath the paved areas of the Property (Appendix A) has not been determined. No action shall be taken to drill or intrude into, or demolish the paved areas demarcated in Appendix A unless the Owner, Johns Manville and/or Commonwealth Edison follows the asbestos renovation procedures set forth in 40 C.F.R. § 61.145 and the procedures identified in the Asbestos Soil Management and Asbestos Health and Safety Plan set forth in Appendix C prior to any activity that would break up, dislodge, or similarly disturb asbestos-containing material underneath the area demarcated in Appendix A.

8. **Right of Access**. Grantor consents to officers, employees, contractors, and authorized representatives of the Holders, Illinois EPA and U.S. EPA entering and having continued access at reasonable times to the Property for the following purposes:

A. Implementing, operating and maintaining the environmental response project described in paragraph 5 above;

B. Monitoring and conducting periodic reviews of the environmental response project described in paragraph 5 above including without limitation, sampling of air, water, groundwater, sediments and soils;

C. Verifying any data or information submitted to U.S. EPA or Illinois EPA by Grantor and Holders; and

D. Verifying that no action is being taken on the Property in violation of the terms of this instrument, the environmental response project described in paragraph 5 above or of any federal or state environmental laws or regulations;

Nothing in this document shall limit or otherwise affect U.S. EPA and Illinois EPA's rights of entry and access or U.S. EPA's and Illinois EPA's authority to take response actions under CERCLA, the National Contingency Plan ("NCP"), RCRA or other federal and state law.

9. **Reserved rights of Grantor**: Grantor hereby reserves unto itself, its successors, and assigns, including heirs, lessees and occupants, all rights and privileges in and to the use of the Property which are not incompatible with the activity and use limitations identified herein.

10. **No Public Access and Use**: No right of access or use by the general public to any portion of the Property is conveyed by this instrument.

11. Future Conveyances, Notice and Reservation:

A. Grantor agrees to include in any future instrument conveying any interest in any portion of the Property, including but not limited to deeds, leases and mortgages, a notice and reservation which is in substantially the following form:

THE INTEREST CONVEYED HEREBY IS SUBJECT TO AND GRANTOR SPECIFICALLY RESERVES THE ENVIRONMENTAL COVENANT EXECUTED UNDER THE UNIFORM ENVIRONMENTAL COVENANTS ACT (UECA) AT 765 ILCS CH. 122 RECORDED IN THE OFFICIAL PROPERTY RECORDS OF _____ COUNTY, ILLINOIS ON _____ AS DOCUMENT NO. _____, IN FAVOR OF AND ENFORCEABLE BY GRANTOR AS A UECA HOLDER, JOHNS MANVILLE AS A UECA HOLDER, THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY AS A UECA HOLDER AND THE U.S. ENVIRONMENTAL PROTECTION AGENCY AS A UECA AGENCY.

B. Grantor agrees to provide written notice to Illinois EPA and U.S. EPA within 30 days after any conveyance of fee title to the Property or any portion of the Property. The notice shall identify the name and contact information of the new Owner, and the portion of the Property conveyed to that Owner.

12. Enforcement and Compliance.

A. Civil Action for Injunction or Equitable Relief. This Environmental Covenant may be enforced through a civil action for injunctive or other equitable relief for any violation of any term or condition of this Environmental Covenant, including violation of the Activity and Use Limitations under Paragraph 7 and denial of Right of Access under Paragraph 8. Such an action may be brought individually or jointly by:

i. the Illinois Environmental Protection Agency;
ii. the Holders of the Environmental Covenant;
iii. U.S. Environmental Protection Agency;

B. Other Authorities Not Affected. No Waiver of Enforcement. All remedies available hereunder shall be in addition to any and all other remedies at law or in equity, including CERCLA. Nothing in this Environmental Covenant affects U.S. EPA or Illinois EPA's authority to take or require performance of response actions to address releases or threatened releases of hazardous substances or pollutants or contaminants at or from the Property, or to enforce a consent order, consent decree or other settlement agreement entered into by U.S. EPA or Illinois EPA. Enforcement of the terms of this instrument shall be at the discretion of the Holders, the U.S. EPA and Illinois EPA and any forbearance, delay or omission to exercise its rights under this instrument in the event of a breach of any term of this instrument shall not be deemed to be a waiver by the Holders, U.S. EPA or Illinois EPA of such term or of any subsequent breach of the same or any other term, or of any of the rights of the Holders, U.S. EPA or Illinois EPA of such term or of any subsequent breach of the same or any other term, or of any of the rights of the Holders, U.S. EPA or Illinois EPA.

C. Former Owners And Interest Holders Subject to Enforcement. An Owner, or other person that holds any right, title or interest in or to the Property remains subject to enforcement with respect to any violation of this Environmental Covenant by the Owner or other person which occurred during the time when the Owner or other person was bound by this Environmental Covenant regardless of whether the Owner or other person has subsequently conveyed the fee title, or other right, title or interest, to another person.

13. Waiver of certain defenses: This Environmental Covenant may not be extinguished, limited, or impaired through issuance of a tax deed, foreclosure of a tax lien, or application of the doctrine of adverse possession, prescription, abandonment, waiver, lack of enforcement, or acquiescence, or similar doctrine as set forth in Section 9 of UECA.

14. Representations and Warranties: Grantor hereby represents and warrants to the Illinois EPA, U.S. EPA and any other signatories to this Environmental Covenant that, at the time of execution of this Environmental Covenant, that the Grantor is lawfully seized in fee simple of the Property, that the Grantor has a good and lawful right and power to sell and convey it or any interest therein, that the Property is free and clear of encumbrances, except those noted on **Appendix D** attached hereto, and that the Grantor will forever warrant and defend the title thereto and the quiet possession thereof. After recording this instrument, Grantor will provide a copy of this Environmental Covenant to all holders of record of the encumbrances including those entities noted on **Appendix D**.

15. Amendment or Termination. Except the Illinois EPA and U.S. EPA, all Holders and other signers waive the right to consent to an amendment or termination of the Environmental Covenant. This Environmental Covenant may be amended or terminated by consent only if the amendment or termination is signed by the Illinois EPA, U.S. EPA and the current owner of the fee simple of the Property, unless waived by the Agencies. If Grantor no longer owns the Property at the time of proposed amendment or termination, Grantor waives the right to consent to an amendment or termination of the Environmental Covenant.

16. Notices: Any notice, demand, request, consent, approval, or communication that either party desires or is required to give to the other shall be in writing and shall either be served personally or sent by first class mail, postage prepaid, addressed as follows:

To Grantor:

_____

_____

_____

To Holder:

_____

_____

_____

To Agencies:

U.S. Environmental Protection Agency
Superfund Division Director
77 West Jackson Boulevard
Chicago, IL 60604

Illinois Environmental Protection Agency
Chief, Bureau of Land
1021 N. Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

17. Recording and Notice of Environmental Covenant, Amendments and Termination.

A. The Original Environmental Covenant. An Environmental Covenant must be recorded in the Office of the Recorder or Registrar of Titles of the county in which the property that is the subject of the Environmental Covenant is located. Within 30 days after the Illinois EPA and U.S. EPA (whichever is later) sign and deliver to Grantor this Environmental Covenant, the Grantor shall record this Environmental Covenant in the office of the County Recorder or Registrar of Titles for the County in which the Property is located.

B. Termination, Amendment or Modification. Within 30 days after Illinois EPA and U.S. EPA (whichever is later) sign and deliver to Owner any termination, amendment or modification of this Environmental Covenant, the Owner shall record the amendment, modification, or notice of termination of this Environmental Covenant in the office of the County Recorder or Registrar of Titles in which the Property is located.

C. Providing Notice of Covenant, Termination, Amendment or Modification. Within 30 days after recording this Environmental Covenant, the Grantor shall transmit a copy of the Environmental Covenant in recorded form to:

i. the Illinois EPA;
ii. the U.S. EPA;
iii. the Holders;
iv. each person holding a recorded interest in the Property, including those interests in Appendix D;
v. each person in possession of the Property; and
vi. each political subdivision in which the Property is located.

Within 30 days after recording a termination, amendment or modification of this Environmental Covenant, the Owner shall transmit a copy of the document in recorded form to the persons listed in items i to vi. above.

18. Compliance Reporting. The Owner, Holder Johns Manville and Holder Commonwealth Edison shall submit to U.S. EPA on an annual basis a written report confirming compliance with the Activity and Use Limitations provided in Paragraph 7. Reports shall be submitted on the first

July 1 that occurs at least six months after the effective date of this Environmental Covenant, and on each succeeding July 1 thereafter. The Owner, Holder Johns Manville and Holder Commonwealth Edison shall notify the Illinois EPA as soon as possible of any actions or conditions that would constitute a breach of the Activity and Use Limitations in Paragraph 7.

19. General Provisions:

A. Controlling law: This Environmental Covenant shall be construed according to and governed by the laws of the State of Illinois and the United States of America.

B. Liberal construction: Any general rule of construction to the contrary notwithstanding, this instrument shall be liberally construed in favor of the grant to effect the purpose of this instrument and the policy and purpose of the environmental response project and its authorizing legislation. If any provision of this instrument is found to be ambiguous, an interpretation consistent with the purpose of this instrument that would render the provision valid shall be favored over any interpretation that would render it invalid.

C. No Forfeiture: Nothing contained herein will result in a forfeiture or reversion of Grantor's title in any respect.

D. Joint Obligation: If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

E. Captions: The captions in this instrument have been inserted solely for convenience of reference and are not a part of this instrument and shall have no effect upon construction or interpretation.

20. Effective Date. This Environmental Covenant is effective on the date of acknowledgement of the signature of the Illinois EPA and U.S. EPA, whichever is later.

21. List of Appendices:

Appendix A – Legal Description and map of the Property
Appendix B – Map of ACM found on shoulders of Greenwood Avenue
Appendix C – Asbestos Soil Management and Asbestos Health and Safety Plan
Appendix D – Title Commitment

[Signature Pages to follow]

THE UNDERSIGNED REPRESENTATIVE OF THE GRANTOR REPRESENTS AND CERTIFIES THAT HE/SHE IS AUTHORIZED TO EXECUTE THIS ENVIRONMENTAL COVENANT.

IN WITNESS WHEREOF, THIS INSTRUMENT HAS BEEN EXECUTED ON THE DATES INDICATED BELOW:

FOR THE GRANTOR:

City of Waukegan

By_____ (signature)

[Name of signer] _____ (print)

[Title] _____ (print)

State of Illinois)
) SS.
County of _____)

On _____, 20 __, this instrument was acknowledged before me by, <Name>, <Title> of the City of Waukegan, on behalf of City of Waukegan.

_____(signature)
Notary Public
My Commissioner Expires _____

THE UNDERSIGNED REPRESENTATIVE OF THE HOLDER REPRESENTS AND CERTIFIES THAT HE/SHE IS AUTHORIZED TO EXECUTE THIS ENVIRONMENTAL COVENANT.

IN WITNESS WHEREOF, THIS INSTRUMENT HAS BEEN EXECUTED ON THE DATES INDICATED BELOW:

FOR THE HOLDER:

Johns Manville

By_____ (signature)

[Name of signer] _____ (print)

[Title] _____ (print)

State of Colorado)
) SS.
County of _____)

On _____, 20 __, this instrument was acknowledged before me by, <Name>, <Title> of Johns Manville, on behalf of Johns Manville.

_____(signature)
Notary Public
My Commissioner Expires _____

THE UNDERSIGNED REPRESENTATIVE OF THE HOLDER REPRESENTS AND CERTIFIES THAT HE/SHE IS AUTHORIZED TO EXECUTE THIS ENVIRONMENTAL COVENANT.

IN WITNESS WHEREOF, THIS INSTRUMENT HAS BEEN EXECUTED ON THE DATES INDICATED BELOW:

FOR THE HOLDER:

Commonwealth Edison

By_____ (signature)

[Name of signer] _____ (print)

[Title] _____ (print)

State of Illinois)
) SS.
County of _____)

On _____, 20 __, this instrument was acknowledged before me by, <Name>, <Title> of Commonwealth Edison, on behalf of Commonwealth Edison.

_____(signature)
Notary Public
My Commissioner Expires _____

FOR THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

By_____ (signature)

_____ , Director
Illinois Environmental Protection Agency

State of Illinois)
)SS.
County of)

This instrument was acknowledged before me on _____, 20____, by _____, a delegate of the Director of the Illinois Environmental Protection Agency, a state agency, on behalf of the State of Illinois.

_____ (signature)
Notary Public
My Commission Expires _____

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

On behalf of the Administrator of the
United States Environmental Protection Agency

By: _____
Richard C. Karl, Director
Superfund Division
U.S. Environmental Protection Agency, Region 5

STATE OF ILLINOIS)
) SS.
COUNTY OF COOK)

The foregoing instrument was acknowledged before me this ___ day of _____, 20__, by Richard C. Karl, Director, Superfund Division, Region 5 of the United States Environmental Protection Agency.

_____ (signature)
Notary Public
My Commission Expires _____

APPENDICES

Respondents will prepare the Appendices and submit them to EPA for review and approval.

ATTACHMENT C

Environmental Covenant Re: Site 3

[space above reserved for recording information]

This instrument was prepared by:

Name:
Address:

Please return this instrument to:

Name:
Address:

ENVIRONMENTAL COVENANT

1. This Environmental Covenant is made this _____ day of _____, 20__, by and among Commonwealth Edison Company (Grantor) and the Holders/Grantees further identified in paragraph 3 below pursuant to the Uniform Environmental Covenants Act, 765 ILCS Ch. 122 (UECA) for the purpose of subjecting the Property to the activity and use limitations described herein.

2. Property and Grantor.

A. Property: The real property subject to this Environmental Covenant is located in Lake County, Illinois and is legally described in Appendix A, hereinafter referred to as the "Property". The county parcel number for this Property is _____.

B. Grantor: Commonwealth Edison Company is the current fee owner of the Property and is the "Grantor" of this Environmental Covenant. The mailing address of the Grantor is _____.

3. Holders (and Grantees for purposes of indexing).

A. Illinois EPA is a Holder (and Grantee for purposes of indexing) of this Environmental Covenant pursuant to its authority under Section 3(b) of UECA. The mailing address of the Illinois EPA is 1021 N. Grand Avenue East, P.O. Box 19276, Springfield, IL 62794-9276.

B. Commonwealth Edison Company is a Holder (and Grantee and Grantor for purposes of indexing) of this Environmental Covenant pursuant to UECA. The mailing address of Commonwealth Edison Company is _____. Regardless of any future transfer of the Property, Commonwealth Edison Company shall remain a Holder of this Environmental Covenant. Commonwealth Edison Company is to be identified as both Grantee and Grantor for purposes of indexing.

C. Johns Manville is a Holder (and Grantee for purposes of indexing) of this Environmental Covenant pursuant to UECA. The mailing address of Johns Manville is 717 17th Street, Denver, CO 80202.

4. Agencies. The Illinois EPA and the U.S. EPA are "Agencies" within the meaning of Section 2(2) of UECA. The Agencies have approved the environmental response project described in paragraph 5 below and may enforce this Environmental Covenant pursuant to Section 11 of UECA.

5. Environmental Response Project and Administrative Record.

A. This Environmental Covenant arises under an environmental response project as defined in Section 2(5) of UECA.

B. Asbestos-containing waste material has been disposed of on the Property. The Property is subject to the National Emission Standard for Asbestos set forth at 40 C.F.R. Part 61, Subpart M.

C. The Property is part of the Johns Manville Southwestern Site Area ("Site"), which is undergoing environmental remediation pursuant to Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"). In an Action Memorandum dated _____, the U.S. EPA Region 5 Division Director selected a removal action for the Property that provided, in part, for the placement and maintenance of a vegetated soil cover over the asbestos contaminated material on the Property. (See Appendix B). The vegetated soil cover means at least six inches of non-asbestos-containing sand beneath compacted non-asbestos-containing soils with the following minimum composition: geotextile layer overlain by 15 inches of native clayey soil, three inches of topsoil and a vegetated cover. The Action Memorandum includes the following remediation options for utility line corridors on the Property: a) removal of ACM to a minimum depth of two feet below each utility line and a minimum width of 25 feet centered on each utility line to provide a clean corridor for maintenance of the line on the Property with placement of a barrier at the base and sides of the excavation; or b) relocation of utiities lines to a fully enclosed utility vault. Asbestos-containing material remains under the vegetated soil cover and outside the barriers and vaults of the clean corridors provided for the utility lines. Activity and use limitations are required under the plan for environmental remediation approved by the Agencies at the Site, including the Property, which are set forth in this Environmental Covenant.

D. Grantor wishes to cooperate fully with the Agencies in the implementation, operation, and maintenance of all response actions at the Site.

E. The Administrative Record for the environmental response project at the Site (including the Property) is maintained at the U.S. EPA Superfund Record Center, 7th Floor, 77 West Jackson Blvd, Chicago, Illinois 60604.

6. Grant of Covenant. Covenant Runs With The Land. Grantor creates this Environmental Covenant pursuant to UECA so that the Activity and Use Limitations and associated terms and conditions set forth herein shall "run with the land" in accordance with Section 5(a) of UECA and shall be binding on Grantor, its heirs, successors and assigns, and on all present and subsequent owners, occupants, lessees or other person acquiring an interest in the Property.

7. Activity and Use Limitations. The following Activity and Use Limitations apply to the use of the Property:

a. No action shall be taken to disturb or intrude into the vegetated soil cover described in paragraph 5.B and Appendix B or to excavate soils on the Property described in Appendix A unless the Owner or Johns Manville controls emissions during the excavation or disturbance and disposes of all excavated soils that contain asbestos-containing material off-site in a licensed facility in accordance with the Asbestos Soil Management and Asbestos Health and Safety Plan in Appendix E.

b. The Owner and/or Johns Manville shall maintain the vegetated soil cover and, if the vegetated soil cover is disturbed, the Owner and/or Johns Manville shall immediately repair or replace the vegetated soil cover according to its original specification described in paragraph 5.B. of this Environmental Covenant and the Action Memorandum.

c. The Property is subject to the Asbestos NESHAP, and all asbestos-containing material must be removed prior to any activity begins that would break up, dislodge, or similarly disturb the asbestos-containing material underneath the vegetative soil cover described in Appendix B.

d. No action shall be taken to disturb either the barriers demarcating the clean corridors for utility areas or the utility vaults described in Appendix F unless the Owner or Johns Manville controls emissions during the excavation or disturbance and disposes of all excavated soils that contain asbestos-containing material off-site in a licensed facility in accordance with the Asbestos Soil Management and Asbestos Health and Safety Plan in Appendix E.

e. Excavated asbestos-containing material soil shall be disposed of off-site in an asbestos-licensed facility in accordance with the Asbestos NESHAP.

f. No action shall be taken to construct buildings on the Property.

g. All uses of the Property are prohibited except those compatible with industrial land use.

h. No action shall be taken to disturb the fence surrounding Site 3 as described in Appendix D.

i. No activities shall be conducted on the Property that extract, consume, or otherwise use any groundwater from the Property.

8. **Right of Access**. Grantor consents to officers, employees, contractors, and authorized representatives of the Holders, Illinois EPA and U.S. EPA entering and having continued access at reasonable times to the Property for the following purposes:

A. Implementing, operating and maintaining the environmental response project described in paragraph 5 above;

B. Monitoring and conducting periodic reviews of the environmental response project described in paragraph 5 above including without limitation, sampling of air, water, groundwater, sediments and soils;

C. Verifying any data or information submitted to U.S. EPA or Illinois EPA by Grantor and Holders; and

D. Verifying that no action is being taken on the Property in violation of the terms of this instrument, the environmental response project described in paragraph 5 above or of any federal or state environmental laws or regulations;

Nothing in this document shall limit or otherwise affect U.S. EPA and Illinois EPA's rights of entry and access or U.S. EPA's and Illinois EPA's authority to take response actions under CERCLA, the National Contingency Plan ("NCP"), RCRA or other federal and state law.

9. **Reserved rights of Grantor**: Grantor hereby reserves unto itself, its successors, and assigns, including heirs, lessees and occupants, all rights and privileges in and to the use of the Property which are not incompatible with the activity and use limitations identified herein.

10. **No Public Access and Use**: No right of access or use by the general public to any portion of the Property is conveyed by this instrument.

11. **Future Conveyances, Notice and Reservation**:

A. Grantor agrees to include in any future instrument conveying any interest in any portion of the Property, including but not limited to deeds, leases and mortgages, a notice and reservation which is in substantially the following form:

THE INTEREST CONVEYED HEREBY IS SUBJECT TO AND GRANTOR SPECIFICALLY RESERVES THE ENVIRONMENTAL

COVENANT EXECUTED UNDER THE UNIFORM ENVIRONMENTAL COVENANTS ACT (UECA) AT 765 ILCS CH. 122 RECORDED IN THE OFFICIAL PROPERTY RECORDS OF _____ COUNTY, ILLINOIS ON _____ AS DOCUMENT NO. _____, IN FAVOR OF AND ENFORCEABLE BY GRANTOR AS A UECA HOLDER, JOHNS MANVILLE AS A UECA HOLDER, THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY AS A UECA HOLDER AND THE U.S. ENVIRONMENTAL PROTECTION AGENCY AS A UECA AGENCY.

B. Grantor agrees to provide written notice to Illinois EPA and U.S. EPA within 30 days after any conveyance of fee title to the Property or any portion of the Property. The notice shall identify the name and contact information of the new Owner, and the portion of the Property conveyed to that Owner.

12. Enforcement and Compliance.

A. Civil Action for Injunction or Equitable Relief. This Environmental Covenant may be enforced through a civil action for injunctive or other equitable relief for any violation of any term or condition of this Environmental Covenant, including violation of the Activity and Use Limitations under Paragraph 7 and denial of Right of Access under Paragraph 8. Such an action may be brought individually or jointly by:

i. the Illinois Environmental Protection Agency;
ii. the Holders of the Environmental Covenant;
iii. U.S. Environmental Protection Agency;

B. Other Authorities Not Affected. No Waiver of Enforcement. All remedies available hereunder shall be in addition to any and all other remedies at law or in equity, including CERCLA. Nothing in this Environmental Covenant affects U.S. EPA or Illinois EPA's authority to take or require performance of response actions to address releases or threatened releases of hazardous substances or pollutants or contaminants at or from the Property, or to enforce a consent order, consent decree or other settlement agreement entered into by U.S. EPA or Illinois EPA. Enforcement of the terms of this instrument shall be at the discretion of the Holders, the U.S. EPA and Illinois EPA and any forbearance, delay or omission to exercise its rights under this instrument in the event of a breach of any term of this instrument shall not be deemed to be a waiver by the Holders, U.S. EPA or Illinois EPA of such term or of any subsequent breach of the same or any other term, or of any of the rights of the Holders, U.S. EPA or Illinois EPA of such term or of any subsequent breach of the same or any other term, or of any of the rights of the Holders, U.S. EPA or Illinois EPA.

C. Former Owners And Interest Holders Subject to Enforcement. An Owner, or other person that holds any right, title or interest in or to the Property remains subject to enforcement with respect to any violation of this Environmental Covenant by the Owner or other person which occurred during the time when the Owner or other person was bound by this Environmental Covenant regardless of whether the Owner or other person has subsequently conveyed the fee title, or other right, title or interest, to another person.

13. **Waiver of certain defenses**: This Environmental Covenant may not be extinguished, limited, or impaired through issuance of a tax deed, foreclosure of a tax lien, or application of the doctrine of adverse possession, prescription, abandonment, waiver, lack of enforcement, or acquiescence, or similar doctrine as set forth in Section 9 of UECA.

14. **Representations and Warranties**: Grantor hereby represents and warrants to the Illinois EPA, U.S. EPA and any other signatories to this Environmental Covenant that, at the time of execution of this Environmental Covenant, that the Grantor is lawfully seized in fee simple of the Property, that the Grantor has a good and lawful right and power to sell and convey it or any interest therein, that the Property is free and clear of encumbrances, except those noted on **Appendix C** attached hereto, and that the Grantor will forever warrant and defend the title thereto and the quiet possession thereof. After recording this instrument, Grantor will provide a copy of this Environmental Covenant to all holders of record of the encumbrances including those entities noted on **Appendix C**.

15. **Amendment or Termination**. Except the Illinois EPA and U.S. EPA, all Holders and other signers waive the right to consent to an amendment or termination of the Environmental Covenant. This Environmental Covenant may be amended or terminated by consent only if the amendment or termination is signed by the Illinois EPA, U.S. EPA and the current owner of the fee simple of the Property, unless waived by the Agencies. If Grantor no longer owns the Property at the time of proposed amendment or termination, Grantor waives the right to consent to an amendment or termination of the Environmental Covenant.

16. **Notices**: Any notice, demand, request, consent, approval, or communication that either party desires or is required to give to the other shall be in writing and shall either be served personally or sent by first class mail, postage prepaid, addressed as follows:

To Grantor:

_____

_____

_____

To Holder:

_____

_____

_____

To Agencies:

U.S. Environmental Protection Agency
Superfund Division Director
77 West Jackson Boulevard
Chicago, IL 60604

Illinois Environmental Protection Agency
Chief, Bureau of Land

1021 N. Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

17. Recording and Notice of Environmental Covenant, Amendments and Termination.

A. The Original Environmental Covenant. An Environmental Covenant must be recorded in the Office of the Recorder or Registrar of Titles of the county in which the property that is the subject of the Environmental Covenant is located. Within 30 days after the Illinois EPA and U.S. EPA (whichever is later) sign and deliver to Grantor this Environmental Covenant, the Grantor shall record this Environmental Covenant in the office of the County Recorder or Registrar of Titles for the County in which the Property is located. .

B. Termination, Amendment or Modification. Within 30 days after Illinois EPA and U.S. EPA (whichever is later) sign and deliver to Owner any termination, amendment or modification of this Environmental Covenant, the Owner shall record the amendment, modification, or notice of termination of this Environmental Covenant in the office of the County Recorder or Registrar of Titles in which the Property is located.

C. Providing Notice of Covenant, Termination, Amendment or Modification. Within 30 days after recording this Environmental Covenant, the Grantor shall transmit a copy of the Environmental Covenant in recorded form to:

i. the Illinois EPA;
ii. the U.S. EPA;
iii. the Holders;
iv. each person holding a recorded interest in the Property, including those interests in Appendix C;
v. each person in possession of the Property; and
vi. each political subdivision in which the Property is located.

Within 30 days after recording a termination, amendment or modification of this Environmental Covenant, the Owner shall transmit a copy of the document in recorded form to the persons listed in items i to vi. above.

18. Compliance Reporting. The Owner shall submit to U.S. EPA on an annual basis a written report confirming compliance with the Activity and Use Limitations provided in Paragraph 7. Reports shall be submitted on the first July 1 that occurs at least six months after the effective date of this Environmental Covenant, and on each succeeding July 1 thereafter. Owner shall notify the Illinois EPA as soon as possible of any actions or conditions that would constitute a breach of the Activity and Use Limitations in Paragraph 7.

19. General Provisions:

A. Controlling law: This Environmental Covenant shall be construed according to and governed by the laws of the State of Illinois and the United States of America.

B. Liberal construction: Any general rule of construction to the contrary notwithstanding, this instrument shall be liberally construed in favor of the grant to effect the purpose of this instrument and the policy and purpose of the environmental response project and its authorizing legislation. If any provision of this instrument is found to be ambiguous, an interpretation consistent with the purpose of this instrument that would render the provision valid shall be favored over any interpretation that would render it invalid.

C. No Forfeiture: Nothing contained herein will result in a forfeiture or reversion of Grantor's title in any respect.

D. Joint Obligation: If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

E. Captions: The captions in this instrument have been inserted solely for convenience of reference and are not a part of this instrument and shall have no effect upon construction or interpretation.

20. Effective Date. This Environmental Covenant is effective on the date of acknowledgement of the signature of the Illinois EPA and U.S. EPA, whichever is later.

21. List of Appendices:

Appendix A – Legal Description and Map of the Property
Appendix B - Vegetative Soil Cover
Appendix C – Title Commitment
Appendix D – Map of Fence surrounding Site 3
Appendix E – Asbestos Soil Management and Asbestos Health and Safety Plan
Appendix F – Location of Barriers and Utility Vaults in Utility Corridors

[Signature Pages to follow]

THE UNDERSIGNED REPRESENTATIVE OF THE GRANTOR REPRESENTS AND CERTIFIES THAT HE/SHE IS AUTHORIZED TO EXECUTE THIS ENVIRONMENTAL COVENANT.

IN WITNESS WHEREOF, THIS INSTRUMENT HAS BEEN EXECUTED ON THE DATES INDICATED BELOW:

FOR THE GRANTOR:

Commonwealth Edison Company

By_____ (signature)

[Name of signer] _____ (print)

[Title] _____ (print)

State of Illinois)
) SS.
County of _____)

On _____, 20 __, this instrument was acknowledged before me by, <Name>, <Title> of Commonwealth Edison, on behalf of Commonwealth Edison.

_____(signature)
Notary Public
My Commissioner Expires _____

THE UNDERSIGNED REPRESENTATIVE OF THE HOLDER REPRESENTS AND CERTIFIES THAT HE/SHE IS AUTHORIZED TO EXECUTE THIS ENVIRONMENTAL COVENANT.

IN WITNESS WHEREOF, THIS INSTRUMENT HAS BEEN EXECUTED ON THE DATES INDICATED BELOW:

FOR THE HOLDER:

Johns Manville

By_____ (signature)

[Name of signer] _____ (print)

[Title] _____ (print)

State of Colorado)
) SS.
County of _____)

On _____, 20 __, this instrument was acknowledged before me by, <Name>, <Title> of Johns Manville, on behalf of Johns Manville.

_____(signature)
Notary Public
My Commissioner Expires _____

FOR THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

By_____ (signature)

_____, Director
Illinois Environmental Protection Agency

State of Illinois)
)SS.
County of)

This instrument was acknowledged before me on _____, 20____, by _____, a delegate of the Director of the Illinois Environmental Protection Agency, a state agency, on behalf of the State of Illinois.

_____ (signature)
Notary Public
My Commission Expires _____

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

On behalf of the Administrator of the
United States Environmental Protection Agency

By: _____
Richard C. Karl, Director
Superfund Division
U.S. Environmental Protection Agency, Region 5

STATE OF ILLINOIS)
) SS.
COUNTY OF COOK)

The foregoing instrument was acknowledged before me this ___ day of _____, 20__, by Richard C. Karl, Director, Superfund Division, Region 5 of the United States Environmental Protection Agency.

_____ (signature)
Notary Public
My Commission Expires _____

APPENDICES

Respondents shall prepare the Appendices and submit them to EPA for review and approval.

ATTACHMENT D
Environmental Covenant Re: Site 4/5

[space above reserved for recording information]

This instrument was prepared by:

Name:
Address:

Please return this instrument to:

Name:
Address:

ENVIRONMENTAL COVENANT

1. This Environmental Covenant is made this _____ day of _____, 20__, by and among Commonwealth Edison Company (Grantor) and the Holders/Grantees further identified in paragraph 3 below pursuant to the Uniform Environmental Covenants Act, 765 ILCS Ch. 122 (UECA) for the purpose of subjecting the Property to the activity and use limitations described herein.

2. **Property and Grantor.**

A. **Property:** The real property subject to this Environmental Covenant is located in Lake County, Illinois and is legally described in Appendix A, hereinafter referred to as the "Property". The county parcel number for this Property is _____.

B. **Grantor:** Commonwealth Edison Company is the current fee owner of the Property and is the "Grantor" of this Environmental Covenant. The mailing address of the Grantor is _____.

3. **Holders (and Grantees for purposes of indexing).**

A. Illinois EPA is a Holder (and Grantee for purposes of indexing) of this Environmental Covenant pursuant to its authority under Section 3(b) of UECA. The mailing address of the Illinois EPA is 1021 N. Grand Avenue East, P.O. Box 19276, Springfield, IL 62794-9276.

B. Commonwealth Edison Company is a Holder (and Grantee and Grantor for purposes of indexing) of this Environmental Covenant pursuant to UECA. The mailing address of Commonwealth Edison Company is _____. Regardless of any future transfer of the Property, Commonwealth Edison Company shall remain a Holder of this Environmental Covenant. Commonwealth Edison Company is to be identified as both Grantee and Grantor for purposes of indexing.

C. Johns Manville is a Holder (and Grantee for purposes of indexing) of this Environmental Covenant pursuant to UECA. The mailing address of Johns Manville is _____.

4. **Agencies.** The Illinois EPA and the U.S. EPA are "Agencies" within the meaning of Section 2(2) of UECA. The Agencies have approved the environmental response project described in paragraph 5 below and may enforce this Environmental Covenant pursuant to Section 11 of UECA.

5. **Environmental Response Project and Administrative Record.**

A. This Environmental Covenant arises under an environmental response project as defined in Section 2(5) of UECA.

B. Asbestos-containing waste material has been disposed of on the Property. The Property is subject to the National Emission Standard for Asbestos set forth at 40 C.F.R. Part 61, Subpart M.

C. The Property is part of the Johns Manville Southwestern Site Area ("Site"), which is undergoing environmental remediation pursuant to Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"). In an Action Memorandum, the U.S. EPA Region 5 Division Director selected a removal action for the Property, that provided, in part, for the placement and maintenance of a vegetated soil cover on the Property. The vegetated soil cover means at least six inches of non-asbestos containing sand beneath compacted non-asbestos-containing soils with the following minimum composition: a geotextile layer overlain by 15 inches of native clayey soil, three inches of topsoil and a vegetated cover. The Action Memorandum includes the following remediation options for utility line corridors on the Property: a) removal of ACM to a minimum depth of two feet below each utility line and a minimum width of 25 feet centered on each utility line to provide a clean corridor for maintenance of the line on the Property with placement of a barrier at the base and sides of the excavation; or b) relocation of utility lines to a fully enclosed utility vault. Asbestos-containing material remains under the vegetated soil cover and outside the barriers and vaults of the clean corridors provided for the utility lines. Activity and use limitations are required under the plan for environmental remediation approved by the Agencies at the Site, including the Property, which are set forth in this Environmental Covenant.

D. Grantor wishes to cooperate fully with the Agencies in the implementation, operation, and maintenance of all response actions at the Site.

E. The Administrative Record for the environmental response project at the Site (including the Property) is maintained at the U.S. EPA Superfund Record Center, 7th Floor, 77 West Jackson Blvd, Chicago, Illinois 60604.

6. Grant of Covenant. Covenant Runs With The Land. Grantor creates this Environmental Covenant pursuant to UECA so that the Activity and Use Limitations and associated terms and conditions set forth herein shall "run with the land" in accordance with Section 5(a) of UECA and shall be binding on Grantor, its heirs, successors and assigns, and on all present and subsequent owners, occupants, lessees or other person acquiring an interest in the Property.

7. Activity and Use Limitations. The following Activity and Use Limitations apply to the use of the Property:

a. No action shall be taken to disturb or intrude into the vegetated soil cover described in paragraph 5.B. and set forth in Appendix B or to excavate soils on the Property described in Appendix A unless the Owner or Johns Manville controls emissions during the excavation or disturbance and disposes of all excavated soils that contain asbestos fibers or asbestos-containing material off-site in a licensed facility in accordance with the procedures in the Asbestos Soil Management and Asbestos Health and Safety Plan in Appendix C.

b. The Owner and/or Johns Manville shall maintain the vegetated soil cover and, if the vegetated soil cover is disturbed, the Owner and/or Johns Manville shall immediately repair or replace the cover according to its original specification described in paragraph 5.B. of this Environmental Covenant and the Action Memorandum

c. No action shall be taken to disturb either the barriers demarcating the clean corridors for utility areas or the utility vaults described in Appendix F unless the Owner or Johns Manville controls emissions during the excavation or disturbance and disposes of all excavated soils that contain asbestos-containing material off-site in a licensed facility in accordance with the Asbestos Soil Management and Asbestos Health and Safety Plan in Appendix E.

d. The Property is subject to the Asbestos NESHAP, and all asbestos-containing material must be removed prior to any activity begins that would break up, dislodge, or similarly disturb the asbestos-containing material underneath the vegetative soil cover described in Appendix B.

e. No action shall be taken to construct a building on the Property.

f. All uses of the Property are prohibited except those compatible with industrial land use.

g. No action shall be taken to disturb the fence surrounding Site 4/5 as described in Appendix E.

h. No activities shall be conducted on the Property that extract, consume, or otherwise use any groundwater from the Property.

8. **Right of Access**. Grantor consents to officers, employees, contractors, and authorized representatives of the Holders, Illinois EPA and U.S. EPA entering and having continued access at reasonable times to the Property for the following purposes:

A. Implementing, operating and maintaining the environmental response project described in paragraph 5 above;

B. Monitoring and conducting periodic reviews of the environmental response project described in paragraph 5 above including without limitation, sampling of air, water, groundwater, sediments and soils;

C. Verifying any data or information submitted to U.S. EPA or Illinois EPA by Grantor and Holders; and

D. Verifying that no action is being taken on the Property in violation of the terms of this instrument, the environmental response project described in paragraph 5 above or of any federal or state environmental laws or regulations;

Nothing in this document shall limit or otherwise affect U.S. EPA and Illinois EPA's rights of entry and access or U.S. EPA's and Illinois EPA's authority to take response actions under CERCLA, the National Contingency Plan ("NCP"), RCRA or other federal and state law.

9. **Reserved rights of Grantor**: Grantor hereby reserves unto itself, its successors, and assigns, including heirs, lessees and occupants, all rights and privileges in and to the use of the Property which are not incompatible with the activity and use limitations identified herein.

10. **No Public Access and Use**: No right of access or use by the general public to any portion of the Property is conveyed by this instrument.

11. **Future Conveyances, Notice and Reservation**:

A. Grantor agrees to include in any future instrument conveying any interest in any portion of the Property, including but not limited to deeds, leases and mortgages, a notice and reservation which is in substantially the following form:

THE INTEREST CONVEYED HEREBY IS SUBJECT TO AND GRANTOR SPECIFICALLY RESERVES THE ENVIRONMENTAL COVENANT EXECUTED UNDER THE UNIFORM ENVIRONMENTAL COVENANTS ACT (UECA) AT 765 ILCS CH. 122 RECORDED IN THE

OFFICIAL PROPERTY RECORDS OF _____ COUNTY, ILLINOIS ON _____ AS DOCUMENT NO. _____, IN FAVOR OF AND ENFORCEABLE BY GRANTOR AS A UECA HOLDER, JOHNS MANVILLE AS A UECA HOLDER, THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY AS A UECA HOLDER AND THE U.S. ENVIRONMENTAL PROTECTION AGENCY AS A UECA AGENCY.

B. Grantor agrees to provide written notice to Illinois EPA and U.S. EPA within 30 days after any conveyance of fee title to the Property or any portion of the Property. The notice shall identify the name and contact information of the new Owner, and the portion of the Property conveyed to that Owner.

12. Enforcement and Compliance.

A. Civil Action for Injunction or Equitable Relief. This Environmental Covenant may be enforced through a civil action for injunctive or other equitable relief for any violation of any term or condition of this Environmental Covenant, including violation of the Activity and Use Limitations under Paragraph 7 and denial of Right of Access under Paragraph 8. Such an action may be brought individually or jointly by:

i. the Illinois Environmental Protection Agency;
ii. the Holders of the Environmental Covenant;
iii. U.S. Environmental Protection Agency;

B. Other Authorities Not Affected. No Waiver of Enforcement. All remedies available hereunder shall be in addition to any and all other remedies at law or in equity, including CERCLA. Nothing in this Environmental Covenant affects U.S. EPA or Illinois EPA's authority to take or require performance of response actions to address releases or threatened releases of hazardous substances or pollutants or contaminants at or from the Property, or to enforce a consent order, consent decree or other settlement agreement entered into by U.S. EPA or Illinois EPA. Enforcement of the terms of this instrument shall be at the discretion of the Holders, the U.S. EPA and Illinois EPA and any forbearance, delay or omission to exercise its rights under this instrument in the event of a breach of any term of this instrument shall not be deemed to be a waiver by the Holders, U.S. EPA or Illinois EPA of such term or of any subsequent breach of the same or any other term, or of any of the rights of the Holders, U.S. EPA or Illinois EPA of such term or of any subsequent breach of the same or any other term, or of any of the rights of the Holders, U.S. EPA or Illinois EPA.

C. Former Owners And Interest Holders Subject to Enforcement. An Owner, or other person that holds any right, title or interest in or to the Property remains subject to enforcement with respect to any violation of this Environmental Covenant by the Owner or other person which occurred during the time when the Owner or other person was bound by this Environmental Covenant regardless of whether the Owner or other person has subsequently conveyed the fee title, or other right, title or interest, to another person.

13. Waiver of certain defenses: This Environmental Covenant may not be extinguished, limited, or impaired through issuance of a tax deed, foreclosure of a tax lien, or application of the

doctrine of adverse possession, prescription, abandonment, waiver, lack of enforcement, or acquiescence, or similar doctrine as set forth in Section 9 of UECA.

14. **Representations and Warranties**: Grantor hereby represents and warrants to the Illinois EPA, U.S. EPA and any other signatories to this Environmental Covenant that, at the time of execution of this Environmental Covenant, that the Grantor is lawfully seized in fee simple of the Property, that the Grantor has a good and lawful right and power to sell and convey it or any interest therein, that the Property is free and clear of encumbrances, except those noted on **Appendix D** attached hereto, and that the Grantor will forever warrant and defend the title thereto and the quiet possession thereof. After recording this instrument, Grantor will provide a copy of this Environmental Covenant to all holders of record of the encumbrances including those entities noted on **Appendix D**.

15. **Amendment or Termination**. Except the Illinois EPA and U.S. EPA, all Holders and other signers waive the right to consent to an amendment or termination of the Environmental Covenant. This Environmental Covenant may be amended or terminated by consent only if the amendment or termination is signed by the Illinois EPA, U.S. EPA and the current owner of the fee simple of the Property, unless waived by the Agencies. If Grantor no longer owns the Property at the time of proposed amendment or termination, Grantor waives the right to consent to an amendment or termination of the Environmental Covenant.

16. **Notices**: Any notice, demand, request, consent, approval, or communication that either party desires or is required to give to the other shall be in writing and shall either be served personally or sent by first class mail, postage prepaid, addressed as follows:

To Grantor:

_____

_____

_____

To Holder:

_____

_____

_____

To Agencies:

U.S. Environmental Protection Agency
Superfund Division Director
77 West Jackson Boulevard
Chicago, IL 60604

Illinois Environmental Protection Agency
Chief, Bureau of Land
1021 N. Grand Avenue East
P.O. Box 19276

Springfield, IL 62794-9276

17. Recording and Notice of Environmental Covenant, Amendments and Termination.

A. The Original Environmental Covenant. An Environmental Covenant must be recorded in the Office of the Recorder or Registrar of Titles of the county in which the property that is the subject of the Environmental Covenant is located. Within 30 days after the Illinois EPA and U.S. EPA (whichever is later) sign and deliver to Grantor this Environmental Covenant, the Grantor shall record this Environmental Covenant in the office of the County Recorder or Registrar of Titles for the County in which the Property is located. .

B. Termination, Amendment or Modification. Within 30 days after Illinois EPA and U.S. EPA (whichever is later) sign and deliver to Owner any termination, amendment or modification of this Environmental Covenant, the Owner shall record the amendment, modification, or notice of termination of this Environmental Covenant in the office of the County Recorder or Registrar of Titles in which the Property is located.

C. Providing Notice of Covenant, Termination, Amendment or Modification. Within 30 days after recording this Environmental Covenant, the Grantor shall transmit a copy of the Environmental Covenant in recorded form to:

i. the Illinois EPA;
ii. the U.S. EPA;
iii. the Holders;
iv. each person holding a recorded interest in the Property, including those interests in Appendix D;
v. each person in possession of the Property; and
vi. each political subdivision in which the Property is located.

Within 30 days after recording a termination, amendment or modification of this Environmental Covenant, the Owner shall transmit a copy of the document in recorded form to the persons listed in items i to vi. above.

18. Compliance Reporting. The Owner shall submit to U.S. EPA on an annual basis a written report confirming compliance with the Activity and Use Limitations provided in Paragraph 7. Reports shall be submitted on the first July 1 that occurs at least six months after the effective date of this Environmental Covenant, and on each succeeding July 1 thereafter. Owner shall notify the Illinois EPA as soon as possible of any actions or conditions that would constitute a breach of the Activity and Use Limitations in Paragraph 7.

19. General Provisions:

A. Controlling law: This Environmental Covenant shall be construed according to and governed by the laws of the State of Illinois and the United States of America.

B. Liberal construction: Any general rule of construction to the contrary notwithstanding, this instrument shall be liberally construed in favor of the grant to effect the purpose of this instrument and the policy and purpose of the environmental response project and its authorizing legislation. If any provision of this instrument is found to be ambiguous, an interpretation consistent with the purpose of this instrument that would render the provision valid shall be favored over any interpretation that would render it invalid.

C. No Forfeiture: Nothing contained herein will result in a forfeiture or reversion of Grantor's title in any respect.

D. Joint Obligation: If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

E. Captions: The captions in this instrument have been inserted solely for convenience of reference and are not a part of this instrument and shall have no effect upon construction or interpretation.

20. Effective Date. This Environmental Covenant is effective on the date of acknowledgement of the signature of the Illinois EPA and U.S. EPA, whichever is later.

21. List of Appendices:

Appendix A – Legal Description and Map of the Property
Appendix B – Vegetative Soil Cover
Appendix C – Asbestos Soil Management and Asbestos Health and Safety Plan
Appendix D – Title Commitment
Appendix E - Map of Fence
Appendix F – Location of Barriers and Utility Vaults in Utlity Corridors

[Signature Pages to follow]

THE UNDERSIGNED REPRESENTATIVE OF THE GRANTOR REPRESENTS AND CERTIFIES THAT HE/SHE IS AUTHORIZED TO EXECUTE THIS ENVIRONMENTAL COVENANT.

IN WITNESS WHEREOF, THIS INSTRUMENT HAS BEEN EXECUTED ON THE DATES INDICATED BELOW:

FOR THE GRANTOR:

Commonwealth Edison Company

By_____ (signature)

[Name of signer] _____ (print)

[Title] _____ (print)

State of Illinois)
) SS.
County of _____)

On _____, 20 __, this instrument was acknowledged before me by, <Name>, <Title> of Commonwealth Edison, on behalf of Commonwealth Edison.

_____(signature)
Notary Public
My Commissioner Expires _____

THE UNDERSIGNED REPRESENTATIVE OF THE HOLDER REPRESENTS AND CERTIFIES THAT HE/SHE IS AUTHORIZED TO EXECUTE THIS ENVIRONMENTAL COVENANT.

IN WITNESS WHEREOF, THIS INSTRUMENT HAS BEEN EXECUTED ON THE DATES INDICATED BELOW:

FOR THE HOLDER:

Johns Manville

By_____ (signature)

[Name of signer] _____ (print)

[Title] _____ (print)

State of Colorado)
) SS.
County of _____)

On _____, 20 __, this instrument was acknowledged before me by, <Name>, <Title> of Johns Manville, on behalf of Johns Manville.

_____(signature)
Notary Public
My Commissioner Expires _____

FOR THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

By_____ (signature)

_____, Director
Illinois Environmental Protection Agency

State of Illinois)
)SS.
County of)

This instrument was acknowledged before me on _____, 20____, by _____, a delegate of the Director of the Illinois Environmental Protection Agency, a state agency, on behalf of the State of Illinois.

_____ (signature)
Notary Public
My Commission Expires _____

FOR THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

On behalf of the Administrator of the
United States Environmental Protection Agency

By: _____
Richard C. Karl, Director
Superfund Division
U.S. Environmental Protection Agency, Region 5

STATE OF ILLINOIS)
) SS.
COUNTY OF COOK)

The foregoing instrument was acknowledged before me this ___ day of _____, 20__, by Richard C. Karl, Director, Superfund Division, Region 5 of the United States Environmental Protection Agency.

_____ (signature)
Notary Public
My Commission Expires _____

APPENDICES

Respondents shall prepare the Appendices and submit them to EPA for review and approval.

ATTACHMENT E
SUBROGATION AGREEMENT

[space above reserved for recording information]

This instrument was prepared by:

Name:
Address:

Please return this instrument to:

Name:
Address:

SUBROGATION AGREEMENT

[UTILITY] of _____ CITY, STATE is the holder of an [EASEMENT] granted by _____ CITY, STATE to UTILITY, dated _____, recorded with the County Registry of Deeds as document number _____, hereafter referred to as [EASEMENT]. A copy of this EASEMENT is set forth in Appendix A.

[UTILITY] intends to abandon the _____ line described in the [EASEMENT].

[UTILITY] hereby assents to the Environmental Covenant, which was granted by COMMONWEALTH EDISON COMPANY pursuant to the Uniform Environmental Covenants Act (UECA), 765 ILCS Ch. 122, dated _____ and recorded with the County Registry of Deeds as Document No. _____ .[to be filled in upon recordation and/or registration of the Environmental Covenant and of this Subrogation Agreement,

immediately following]. A copy of the Environmenmental Covenant is set forth in Appendix B.

[UTILITY] agrees that the EASEMENT shall be subject to the Environmental Covenant and to the rights, covenants, restrictions and easements created by and under said Environmental Covenant insofar as the interests created under the EASEMENT affect the Property identified in the Environmental Covenant as if for all purposes said Environmental Covenant had been executed, delivered and recorded prior to the execution, delivery and recordation and/or registration of the EASEMENT.

List of Appendices:

Appendix A – [Easement]
Appendix B – Environmental Covenant

THE UNDERSIGNED REPRESENTATIVE OF THE HOLDER REPRESENTS AND CERTIFIES THAT HE/SHE IS AUTHORIZED TO EXECUTE THIS SUBROGATION AGREEMENT.

IN WITNESS WHEREOF, THIS INSTRUMENT HAS BEEN EXECUTED ON THE DATES INDICATED BELOW:

FOR THE HOLDER:

[UTILITY]

By_____ (signature)

[Name of signer] _____ (print)

[Title] _____ (print)

State of Illinois)
) SS.
County of _____)

On _____, 20 __, this instrument was acknowledged before me by, <Name>, <Title> of [UTILITY], on behalf of [UTILITY].

_____(signature)
Notary Public
My Commissioner Expires _____

APPENDICES

Respondents shall prepare the Appendices and submit them to EPA for review and approval.

ATTACHMENT F

Asbestos Soil Management and Asbestos Health and Safety Plan

Southwestern Site Area: Sites 3, 4/5, and 6

Table of Contents

Figures

Appendices

1. Introduction

The purpose of this Asbestos Soil Management Plan (SMP) and Asbestos Health and Safety Plan (HSP) is to address soil management and health and safety matters related to potential asbestos exposure during future (post-remedy) excavation and construction activities beneath the soil barrier (or equivalent) that are completed by property owners and/or utility and other easement holders within the Southwestern Site Area (Sites 3, 4/5, and 6). It does not extend to other soil management or health and safety matters (e.g., excavation/trenching requirements pursuant to OSHA or other applicable standards) related to work being conducted.

2. Site Description

The Southwestern Site Area (the "Site") is located in areas adjacent to the western and southern borders of the Johns Manville (JM) property and consists of Sites 3, 4/5, and 6. Site 3 is owned by Commonwealth Edison Company (ComEd) and is located south of the Greenwood Avenue right-of-way and east of North Pershing Road near the southwestern corner of the former JM manufacturing facility (**Figure O-1). Figure O-1** shows the occurrence of asbestos within Site 3 as identified in 1999 and 2008 investigations.

Site 4/5 is located adjacent to the western boundary of JM's former manufacturing facility within a ComEd right of way. Site 4/5 consists of an upland area and a low lying swale area between the upland area and a railroad right-of-way to the west. **Figures O-2** show the occurrence of asbestos within Site 4/5 in both plan and cross-section view as identified in a 2008 investigation.

Site 6 is located adjacent to the JM property on the unpaved shoulders of Greenwood Avenue within the road right-of-way. Site 6 extends east from the eastern end of the Greenwood Avenue elevated approach to Pershing Road to the western boundary of Site 2. **Figure O-3** shows the occurrence of asbestos within Site 6 as identified in a 2008 investigation.

In certain areas of the Site, asbestos-containing building materials mixed with soil (principally Transite™ materials such as pipe and siding) have been covered by a two-foot thick (or equivalent) clean soil barrier.

3. Potential Health Risks

Exposure to asbestos carries potential health risks. If the soil barrier is penetrated, exposure to asbestos-affected soil/debris may occur and therefore, any disturbance of the underlying asbestos-affected soil must be properly managed to avoid health risks.

Dust from this asbestos-containing material can be hazardous when inhaled. Exposure to asbestos dust can cause irritation of eyes and mucous membranes, upper respiratory irritation, delayed and often serious breathing problems, and stomach upsets. Asbestos can produce a lung fibrosis called asbestosis. Asbestos is also a cancer-producing agent (lung cancer and mesothelioma, among others). Heavy exposure to dust containing asbestos can also cause skin irritation. Epidemiological studies have shown that lung cancer appears to be related to the degree of exposure, the type of asbestos and whether or not the individuals smoke cigarettes. It is significant that cigarette smoking greatly increases the risk of lung cancer in those who are exposed to asbestos.

4. Soil Management Plan

A 48-hour notice of intent to enter the property shall be provided to ComEd and Johns Manville prior to any excavation, construction or other activity that would break up, dislodge, or similarly disturb the vegetative cover or the asbestos-containing material underneath the vegetative cover. ComEd and JM personnel shall conduct the following activities and/or provide oversight for handling of asbestos contaminated materials during any excavation, construction or other activity that may break up, dislodge, or similarly disturb the vegetative cover and underlying asbestos-containing material.

Notification shall be provided to:

ComEd Environmental Manager
Tim Bulthaup, Manager Environmental Programs
Com Ed
3 Lincoln Centre
Oakbrook Terrace, IL 60181
Office: 630-576-6725
Cell: 630-247-9569
Pager: 877-366-0967

JM Waukegan Site Manager,
Denny Clinton
Johns Manville
1871 North Pershing Road
Waukegan, IL 60087
Cell: 303-808-2127

U.S. EPA Remedial Project Manager (Johns Manville Site)
Matthew Ohl
U.S. Environmental Protection Agency
77 West Jackson Blvd,
Mail Code SR-6J
Chicago, IL 60604-3590
Tel: 312-886-4442
FAX: 312-692-2447

A person competent in asbestos-related work ("Competent Person") shall be assigned to any project where the potential exists for encountering asbestos-affected soil (*i.e.,* excavations in areas where soil barriers have been placed) for the purpose of conducting asbestos hazard identification and mitigation during the planning, construction, and soil management phases of work activities. As defined in 29 C.F.R. §1926.1101(b), ***Competent Person*** means, in addition to the definition in 29 C.F.R.§ 1926.32 (f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 C.F.R. § 1926.32(f).

Prior to excavation, construction and/or any activity begins that would break up, dislodge, or similarly disturb the vegetative cover or the asbestos-containing material underneath the vegetative cover, all asbestos-containing material shall be removed and disposed of off site as required by the renovation provisions of 40 C.F.R. § 61.145(c). The following procedures shall be implemented regarding soil management:

a. **Worker Training**—At a minimum, 2-hour asbestos awareness training for all site personnel anticipated to be present within the work area is required, with additional training as may be specified in 29 C.F.R. § 1926.1101

(Asbestos OSHA Standard) or OSHA guidance in place at the time of the work.

b. **Removal of Soil Barrier** – A two-foot thick soil barrier or pavement is in place over the underlying asbestos-impacted soil. Prior to disturbing the underlying asbestos-impacted soil, the barrier will be removed in such a manner that prevents cross-contamination of the barrier materials with the underlying asbestos-impacted soil. However, to further mitigate the potential for cross-contamination during excavation, the soil barrier material removed deeper than eighteen inches below ground surface and any soil barrier materials that may have come into contact with or mixed with asbestos affected soil or any soil below the barrier will be considered contaminated and will not be re-used as clean soil barrier material. In that case, this material must be managed as a waste material which must be disposed of off-site at a facility licensed to accept asbestos wastes.

c. **Dust Control Procedures** – Work shall be completed at the direction of the Competent Person using wet methods such that no visible emissions (*i.e.*, dust) will be allowed during any activities. The contractor shall comply with all OSHA asbestos requirements including personal air monitoring. The presence of visible emissions in any work area shall result in immediate notification of this condition to all parties listed in paragraph a, above and immediate stoppage of all activities in that area until visible emissions can be controlled.

d. **On-Site Management of Excavated Soils** –Asbestos-containing material including debris/soil shall be placed directly into plastic-lined roll-off boxes or trucks and covered by competent plastic sheeting. At no time will asbestos-affected debris/soil be allowed to remain uncovered overnight.

e. **Off-Site Soil Disposal** – All asbestos-containing material shall be disposed off-site at a facility licensed to accept asbestos wastes in accordance with all local, state, and federal regulations.

f. **Equipment Decontamination** – Any equipment (*i.e.*, excavators, shovels, etc.) that contacts asbestos-affected debris/soil shall be decontaminated prior to leaving the work zone. Decontamination may include removal of visible debris and equipment washing, and rinseate testing, as necessary to ensure no asbestos fibers remain on the equipment or otherwise leave the

area of excavation. Any decontamination wastes (*e.g.,* washwater) shall be managed in accordance with all local, state, and federal regulations.

5. Asbestos Health and Safety Plan

The Competent Person assigned to the project (Section 4) shall be responsible for development and implementation of health and safety activities related to asbestos hazards during all phases of work. Work activities include pre-construction planning, worker protection, air monitoring, site access and control, decontamination, and control procedures.

5.1 Pre-Excavation/Construction Activities

Prior to conducting any excavation/construction activities within the Southwestern Site Area, Site figures and environmental covenants shall be reviewed and the site visually inspected to determine whether the activities may result in contacting asbestos-affected soil beneath a soil barrier. If that is the case, then a Competent Person shall be identified to address/manage asbestos-related matters as described in this plan. The asbestos emission control procedures for renovations set forth in 40 C.F.R. § 61.145(c) shall be followed prior to any excavation, construction or any activity that would break up, dislodge, or similarly disturb asbestos-containing material or preclude access to the material.

5.2 Worker Protection in Areas of Asbestos Disturbance

As prescribed by the Competent Person, an asbestos work zone and perimeter related to the potential for asbestos exposure will be established. The size of the perimeter will be based on the daily task activities and should be discussed with all project personnel during a tailgate or job safety meeting. The work zone should delineated by traffic cones, barricades, signs, caution tape, or other means effective in identifying the work zone perimeter. Only authorized personnel will be allowed inside the perimeter of the work zone. Other site workers and visitors to the site should be kept out of the work zone. If visitors need access to the work zone, the visitors should have an escort at all times.

Unless otherwise directed by the Competent Person, each worker within the asbestos work zone must take the following minimum precautions by wearing

proper personal protective equipment (PPE) to limit the potential risk of asbestos exposure via dermal contact, ingestion, or inhalation:

- National Institute for Occupational Safety and Health– (NIOSH-) approved half-face or full-face air-purifying respirator (APR) equipped with HEPA filter cartridges. Respirators will be stored in clean containers (*e.g.*, self-sealing bag) when not in use. Respirator cartridges will be replaced at least weekly or whenever the employee detects an increase in breathing resistance. Respiratory protection must be conducted in accordance with, at a minimum, the requirements set forth in 29 C.F.R. § 1926.1101(h).

- Washable boots or disposable boot coverlets to be removed at the completion of a work shift and only in change areas provided for that purpose.

- Coveralls or similar full-body work clothing (*e.g.*, disposable Tyvek suits).

- Nitrile or Latex Protective disposable gloves.

- Do not eat, drink or smoke in any area where excavation work is being performed.

- Avoid direct contact, to the greatest extent practicable, with asbestos-affected soil.

5.3 Air Monitoring During Maintenance and Construction Work Activities

A Competent Person shall assess the appropriate level of air monitoring and respiratory protection necessary for each phase of work. Pursuant to 29 C.F.R. § 1926.1101(c)(1), the employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.1 fiber per cubic centimeter of air (f/cc) as an eight (8) hour time-weighted average (TWA). Moreover, the employer shall ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 f/cc as averaged over a sampling period of thirty (30) minutes (Excursion Limit).

5.4 Decontamination

All employees exiting the work zone will remove contaminated PPE and place it in appropriate containers for proper off-site disposal in accordance with all applicable federal, state, and local regulations. In most cases this may be interpreted to be disposal in a landfill licensed to accept asbestos-affected waste materials.

6. Emergency Contact List

In the event that an injury, over-exposure or spill has occurred, Appendix A provides the emergency contact list for the project. All employees working on this project should be shown the location and proper use of all emergency equipment prior to beginning work on the project.

Appendix A

Emergency Contact List

Appendix A –
Emergency Contact List

Southwestern Site Area
Sites 3, 4/5, and 6

Waukegan, Illinois

Emergency Contact List

Emergency Contact	Phone
Local Police	911 (if appropriate) and 847-360-9000
Local Ambulance	911 (if appropriate) and 847-360-3000
Local Fire Department	911 (if appropriate) and 847-249-5410
Local Hospital – Victory Memorial Hospital	847-360-3000
Local Weather Data	http://www.weather.gov/ http://www.weather.com/ http://www.nws.noaa.gov/nwr/
Poison Control	800.332.3073
National Response Center (all spills in reportable quantities)	800.424.8802
U.S. Coast Guard (spills to water)	800.424.8802

Emergency Notification Procedure:

Step 1: Dial 911

Step 2: Contact Respondents

Step 3: Wait for appropriate emergency personnel to arrive onsite

Step 4: Direct emergency personnel to incident area

If emergency attention is not needed but professional medical attention is necessary, the employee will be taken to (see hospital route):

Medical Facility: Victory Memorial Hospital
Address: 1324 North Sheridan Road
Waukegan, IL 60087

Phone Number: 847-360-3000

Appendix A –
Emergency Contact List

Southwestern Site Area
Sites 3, 4/5, and 6

Waukegan, Illinois

ATTACHMENT G

RESPONSIVENESS SUMMARY

SOUTHWESTERN SITE AREA
WAUKEGAN, LAKE COUNTY, ILLINOIS

To provide the public with an opportunity to comment on the proposed response action, EPA held a public comment period from February 10, 2012 to March 12, 2012 and a public open house on February 22, 2012.

Response to Comments Received from the Public via Electronic Mail During the Public Comment Period

Electronic Mail (Email) 1

1. *Hi, I would like to know what kind of traffic plan is in place for when the material is removed. A couple of years ago a huge number of dump trucks were used in some sort of project using Greenwood Avenue from the Lakefront. Some of the problems I saw were: trucks appeared to be speeding going south on Sheridan road (more than 40mph). Trucks going south used the median on Sheridan as a third turn lane to turn east on Greenwood, cutting off cars trying to turn. Trucks were speeding thru that turn - I saw one had overturned, was laying on it's side with it's load spilled into Bob and Anne's parking lot. It appeared the trucks were taking something from the lakefront to Veolia's on Greenbay in Zion. Just doing my errands I'd see that the route they took was Sheridan north to Wadsworth west and north to Veolia. And reverse on the return. I had seen the trucks at different times going in either direction, speeding up to go thru lights turning yellow and then red as they passed thru. During the morning rush hour, these trucks have very little regard for other drivers and constantly lay on their air horns when drivers try to change lanes to turn onto Greenwood from southbound Sheridan. I live on the corner of Longview and Sheridan and I see school bus drivers unable for a long time to make a left turn onto Sheridan from Longview because truckers are either approaching very fast (southbound toward Greenwood light) or are stopped so far north on Sheridan because of traffic build up and the truckers won't let them through. The dirt chunks that are left on Greenwood from east of the Amstutz to Sheridan are left to get so big, cars can drive about 20mph to avoid breaking an axle. This is from the Amstutz west to Sheridan. Is anything planned to mitigate these traffic problems?*

Response: The Action Memorandum requires that Respondents submit and implement a U.S. EPA approved transportation plan as part of the Removal Action Work Plan that will ensure truck traffic is directed to and from the Site during construction in a safe and orderly manner. The Action Memorandum also requires that the transportation plan include a street sweeper to clean streets regularly to remove dirt that is left behind on the roads by trucks transporting material in and out of the Site.

Email 2

2. *I am a resident of Waukegan and live less than one mile from the Johns-Manville site. I also regularly jog on the shoulder of Greenwood Avenue (Site 6). My*

preference is for Alternative 1 (complete removal). This alternative unquestionably would be the most effective, and once the material is removed there would be no need for long-term maintenance. Alternative 5 would leave asbestos-containing material in the area, and does not appear to address restoration of the wetland area in Site 4/5.

Response: The Action Memorandum selected Alternative 5, which includes removal of asbestos-containing soil in the shoulder of Greenwood Avenue (Site 6). However, asbestos will remain on Sites 3, 4 and 5 after implementation of the remedy. At Sites 3, 4 and 5, the asbestos will not be accessible to the public or releasable to the air because it will be covered with a vegetated soil cover of clean material. Note that Alternative 5 for Sites 4/5 does include restoration of 100% of the original on-site wetlands area of 4.09 acres to the extent it is impacted by the response action. The Action Memorandum requires that Respondents prepare and implement a storm water management and wetlands restoration plan as part of the Removal Action Work Plan.

3. *I would also like to express my concern about the fact that, nearly 30 years after the Johns-Manville site was listed on the NPL, the asbestos-containing material in the surrounding area has still not been fully cleaned up. I am glad to see that EPA is planning to address this, and hope that an effective remedy will be put into place.*

Response: Comment noted.

Email 3

4. *I believe that Waukegan has waited long enough for this area to be cleaned up - it is 450 acres sitting right on our lakefront, which is earmarked to be the key development area in our economically depressed area - we paid a heavy price for the contamination in the first place, with many of our citizens being sickened by the asbestos-laden products produced at that site - since its closure, we have paid a heavy price with negative publicity and loss of valuable property that could trigger a revival of Waukegan's economy - we want the ENTIRE AREA CLEANED UP ONCE AND FOR ALL - there should be no plans to leave warning signs of eminent danger of toxic pollutants remaining at that site when the EPA leaves - the property should get its NFR letter and be ready for redevelopment when the owner is let off the hook - please do not keep the people of Waukegan on the hook with any remainder of this environmental mess....*

Response: The Action Memorandum addresses the JM Southwestern Site (approximately 7.5 acres) identified in Attachment A to the Action Memorandum but does not address areas outside of the Southwestern Site such as the JM owned portion of the NPL Site or JM manufacturing area currently enrolled in the State of Illinois Voluntary Site Remediation Program (SRP). Although not addressed by this Action Memorandum, the U.S. EPA and/or the State of Illinois has investigated and conducted

certain response actions or are currently investigating the JM owned NPL Site and SRP Property.

After implementation of the proposed remedy, asbestos will remain on Sites 3, 4 and 5 of the Southwestern Site, which will be covered with at least 24 inches of material with vegetation. The current owner of Site 3, 4 and 5 will implement environmental covenants restricting use at these areas. Since ACM waste will remain at the Site, the fence and warning signs will have to stay to caution and protect the public from any exposure to the ACM waste.

Response to Comments Received from North Shore Sanitary District on March 9, 2012

Site 4/5

1. *The District supports the U.S. EPA's plan to clean up areas contaminated with asbestos in the area near the Johns Manville and Commonwealth Edison properties in Waukegan, IL. The District also understands and shares the concerns regarding maintenance workers' exposure to asbestos-containing materials while servicing utility lines in these areas.*

Response: The comments provided by North Shore Sanitary District (NSSD) for Site 4/5 have been noted by the U.S. EPA.

2. *However, we strongly object to U.S. EPA's position in the proposed cleanup plan that the need for access and repair to sewer lines at Site 4/5 appears to be much lower than other utilities and that immediate action is not necessary in the event of damage to or failure of sanitary sewer lines located within Site 4/5.*

   The two District sanitary sewer lines located in Site 4/5 are large diameter (39" & 48") interceptor sewers with a combined capacity of approximately 40 MGD. The interceptors convey raw sewage from Waukegan, Zion, Beach Park and Winthrop Harbor to the District's Waukegan Sewage Treatment Plant. Any damage or failure of these lines would result in significant and immediate environmental and public health concerns for this area, and would therefore require an immediate response to correct the situation.

   The District strongly supports and recommends that U.S. EPA implement it's recommended clean up approach presented in Alternative 5, which includes modified Alternative 2 for Site 4/5 with the provision that a clean corridor is provided for all utility lines in the area, including the District's interceptor sewers. This plan would achieve the overall objective for the cleanup and essentially eliminate the potential for release of or direct contact with asbestos-containing material.

Response: The NSSD's objection to the U.S. EPA selected remedy regarding immediate action of repair to the sanitary sewer line at Site 4/5 has been noted. Based upon the public comments received from the NSSD and subsequent discussions with NSSD, EPA is making a change to the proposed response action for Site 4/5. This change would accelerate the timing of ACM removal to create a clean utility corridor at Site 4/5 or alternatively, allow for the abandonment of the sewer lines in place and reconstruction of the sewer lines nearby and outside of the soils with ACM or asbestos fibers. This change could have been reasonably anticipated based upon the proposed removal of asbestos to create clean utility corridors for other utilities and the proposed abandonment in place of the gas line at Site 4/5.

Response to Comments Received from a member of the Waukegan Community Advisory Group Received on February 22, 2012

1. *Favored alternative 5 – What is "clean soil"?*

Response: The details of the type of soil that will be used for backfill and cover material will be determined as part of the Removal Action Work Plan process, which is the next phase of this project.

2. *Will sand be Lake Michigan beach soil? Will native plants be local genotype?*

Response: The specific source of soil and/or sand is not known at this time. Respondents will submit a detailed design, monitoring and maintenance plan, with specified performance standards, for U.S. EPA review and approval, for restoring the 4.09 acres of emergent wetlands that may be impacted as part of the Work Plan. The specification of soil type will be determined during the Removal Action Work Plan phase of the project. The soil that will be used in construction will meet the specifications in the approved Removal Action Work Plan.

For Site 3, the Action Memorandum requires native plant species including heavy hydroseeding with little bluestem (Schizachyrium scoparium). The seed must be of midwest genotype preferably from sources within several hundred miles of the site. If requested by U.S. EPA, Respondents shall apply a secondary seeding to provide root growth between the bunch grass for erosion control, thereby potentially reducing maintenance requirements after the excavation work has been completed. If approved by U.S. EPA, other native plant species may need to be added during the secondary seeding to control erosion, but no invasive plants such as crown vetch shall be used.

3. *What type of soil is compacted & what does compacted mean?*

Response: In this case the term compacted refers to the compressing of soil particles to improve the engineering properties of the soil. Generally soil compaction prevents soil settlement and frost damage; provides stability; and reduces water seepage, swelling,

contraction and settling of soil. The compaction requirements will be determined in the Removal Action Work Plan.

4. *Will there be assessment of flora & fauna (current)?*

Response: The Respondent conducted a wetlands delineation of Site 4/5, which is set forth in Appendix K of the EE/CA. The Action Memorandum requires that the Removal Action Work Plan include an Operation and Maintenance Plan, which will require review and maintenance of wetlands restoration.

5. *How will the wetland be restored?*

Response: It is Superfund Policy to require a minimum of one acre of wetlands mitigation for each acre of wetland filled. See "Considering Wetlands at CERCLA Sites," OSWER 9280.0-03). On Site 4/5, the Respondents delineated 4.09 acres of an emergent marsh that has high functional value for sediment/toxicant retention, and nutrient removal/transformation. The wetland has moderate functional value for storm water detention and wildlife habitat. It has high native vegetative quality based on the Floristic Quality Assessment (FQA). The wetlands lost during construction will be restored at the same locations or some other nearby location following the Federal Mitigation Rule. The Federal Mitigation Rule requires that mitigation plans include the same 12 fundamental components: objectives; site selection criteria; site protection instruments (e.g., conservation easements); baseline information (for impact and compensation sites); credit determination methodology; a mitigation work plan; a maintenance plan; ecological performance standards; monitoring requirements; a long-term management plan; an adaptive management plan; and financial assurances. (*Compensatory Mitigation for Losses of Aquatic Resources; Final Rule* 40 C.F.R. § 230.94(c)(2-14)).

6. *Some of the native vegetation prefers beach sand over other types of sand (sea rocket, seaside spurge). Beach sand is highly preferable. The soil in this area is primarily sand. Clay & black top soil are not suitable. Native plants have root systems that may exceed 15 feet. A clay cap and/or geotextile may/will inhibit survival of the plants used for restoration.*

Response: The Action Memorandum requires that appropriate soils and vegetation will be used to ensure the integrity of the vegetated soil cover and prevent the introduction of invasive species. The details of the types of soil and vegetation to be used will be further refined in the Removal Action Work Plan.

7. *Using non-native & plants that are not local genotype is not acceptable because of the closeness of the IBSP Nature Preserve. Local insects are highly dependent on native vegetation as a food source. IBSP & the Waukegan Dunes are highly diverse areas which are home to many E & Ts. Introduction of non-native soil, plants & animals may jeopardize the diversity of this area.*

Response: During development of the Removal Action Work Plan and construction of the selected remedy efforts will be made to ensure that appropriate native plant species

are used to the extent practicable without impacting the integrity of the response action. See response to 5 and 6 above.

8. *Plants such as crown vetch for soil stability is not acceptable because of its invasiveness.*

Response: The Action Memorandum does not allow crown vetch as part of the soil cover. The responsible party will be required to ensure that the plant mix used to restore the Site does not contain invasive plants. This issue will be addressed during the Removal Work Plan phase of the selected remedy.

9. *Merriam grass, sand reed grass, little bluestem, beach wormwood, St. Johnswort etc are native plants but don't provide thick ground cover.*

Response: An appropriate plant mix will be used by the responsible party to restore the Site. This issue will be addressed during the Removal Action Work Plan phase of the selected remedy. The use of these grasses should reduce the need for watering, fertilizing, mowing, and other maintenance. The vegetated soil cover must be carefully maintained to prevent the growth of weeds or invasive species of plants due to the close proximity to the nature preserve. The vegetated soil cover must be constructed above the estimated high groundwater elevation (post construction) to protect its integrity and long-term performance.

10. *Plants of the lake shore community do not produce thick vegetation so I wouldn't expect a thick ground cover from native vegetation.*

Response: Appropriate plant mix will be used by the responsible party to restore the Site. This issue will be addressed in the Removal Action Work Plan of the selected remedy.

11. *Once the area is restored periodic monitoring for non-native & invasive species will be required.*

Response: Under the AOC, the cap will be monitored for integrity as well as non-native and invasive species periodically during the operation and maintenance period. This period is at least 30 years and it starts when construction is completed.

Response to Comments Received from Johns Manville and ComEd (Respondents) on March 12, 2012

REMEDY SELECTION AND RESPONDENTS' COMMENTS TO U.S. EPA'S PROPOSED ALTERNATIVE

Site 3

1. *Respondents' Comment: ComEd and JM believe that placement of the two-foot thick soil barrier and proposed excavation in the northeast corner is an appropriate and protective remedy for Site 3 (Alternative 2). The Respondents object to the creation of "clean corridors" for each utility, as well as the need for geotextile at the base of the soil barrier. As proposed, Alternative 2 is in compliance with regulatory requirements and is, therefore, an acceptable remedy, even without the geotextile. U.S. EPA's additional requirements embodied in their Alternative 5, are excessive and burdensome; and do not provide a material reduction in risk to human health or the environment for the substantial increase in cost – contrary to the remedy selection requirements of CERCLA, the NCP and U.S. EPA guidance.*

Response: The geotextile layer or barrier provides a visual marker of potential underlying asbestos contamination and thus helps to prevent "accidental overexcavation" or disturbance of the underlying contamination. The geotextile layer also provides added protection against the upward movement of large particles, such as broken scraps of ACM, through the soil with each freeze/thaw cycle. The additional protection to the public outweighs the additional cost of the geotextile layer. The added protection to human health and environment is achieved with increase in cost that is expected to be less than 1% of the total response action cost. The requirement to excavate soil in northeast portion of Site 3 (approximately 0.14 acres) identified as the limited excavation area shown in Figure 15 of the EE/CA is reasonable and necessary. This area contains materials with high levels of asbestos and the potential for disturbance is higher than other areas due to its location making a cover over the area less reliable.

Site 4/5

2. *Respondents' Comment: The Respondents agree with installing the 3.2-acre cover of the area identified in the EE/CA (Revision 4). However, the Respondents disagree with the need to install a soil cover over the additional 2.7 acres of "wet areas" referred to by the U.S. EPA. U.S. EPA has not specifically identified the location of this "wet area," though presumably it is some variant of the area of surface water located towards the west.*

Response: The 2.7 acre area includes the wet area on the west portion of the Sites. This area was not sampled due to presence of standing water in this area of the Sites. Samples collected from grids up to the edge of this wet area contained ACM. Therefore, it is safe to presume that this wet area may also contain ACM that may be accessible to

the public during dry periods. The capping of this area will address the potential risk to human health and environment for exposure to ACM present in the wet area. During Design the Respondents may choose to sample the wet area to deterimine whether ACM is present. At that time the Agency will consider those results and may revisit the requirement to cap this area.

3. *Respondents' Comment: In addition, clarity is needed from the U.S. EPA with respect to the proposed environmental covenant with North Shore Sanitary District (NSSD).*

Response: Under the proposed plan, U.S. EPA included an Environmental Covenant for Site 4/5 that required removal of ACM on and underneath the NSSD sewer line by a date agreed to between NSSD and the Respondents. The removal action in the Action Memorandum selects a date certain for the removal of ACM by Respondents from the sewer line corridor and thus the Environmental Covenant is no longer a part of the removal action. The Action Memorandum also sets forth an alternative action whereby in lieu of complete removal of ACM along the utility line, Respondents could re-route the NSSD sewer line and abandon the existing sewer lines. The alternative action would require voluntary agreement by NSSD to abandon the existing sewer lines and subrogate its easements to the Environmental Covenant to prohibit interference with the vegetated soil cover.

Site 6

4. *Respondents' Comment: Inherent in Alternative 5 is an opinion on the part of the U.S. EPA that, while an environmental covenant may be applied to the area beneath the surface of an asphalt roadway, it is not appropriate to apply it to a two-foot soil cover on the shoulders of the road. The Respondents object to this arbitrary determination of covenant applicability and use. As proposed, Alternative 3 is in compliance with regulatory requirements and is, therefore, an acceptable remedy. U.S. EPA's additional requirements embodied in their Alternative 5 are therefore excessive and burdensome, and do not provide a material reduction in risk to human health or the environment for the substantial increase in cost contrary to remedy selection requirements of CERCLA, the NCP and US EPA guidance.*

Response: U.S. EPA has considered the potential for asbestos to be released from beneath an unusually thick roadbed vs. the roads unpaved shoulder and does not find them to be comparable. The paved surface and built-up roadbed offers more of a deterrent to excavation or unintentional disturbance than the unpaved shoulder. Treating the areas differently is appropriate. Furthermore, institutional controls such as environmental covenants supported by property access systems are only intended to supplement engineering controls, not replace them.

5. *Respondents' Comment: The Asbestos NESHAP requires signage in areas where ACM is present and a soil cover is not used. As there will be no areas in Site 6 with known ACM remaining that will not have a cover meeting the NESHAP*

standards, Respondents do not believe signage is required on Site 6 by any ARAR. And, as noted in the JULIE section below, Respondents believe there are other ways to provide notice to those who might excavate in Site 6 or the paved roadway.

Response: The Action Memorandum requires Respondents to install and maintain warning signs or monuments at every point where a utility line passes under Greenwood Avenue. If during or after the soil excavation at Site 6, visual observation, samples from the sidewall, or other samples that may be collected indicate the presence of ACM or asbestos fibers under Greenwood Avenue, then Respondents must install and maintain warning signs or monuments every 100 ft. in length along Greenwood Avenue in all areas where ACM or asbestos fibers may remain in place. The Action Memorandum also requires signage for Sites 3 and 4/5.

ARARS

Site 3

6. *Respondents' Comment: The U.S. EPA has posited that the Respondent's preferred alternative for Site 3 may not comply with Applicable or Relevant and Appropriate Requirements (ARARs) (see U.S. EPA revisions to Table 10 and Section 5.2.1.2), principally on the grounds that (i) "[a]reas subject to utility easements will be disturbed during maintenance and other purposes and at such times the asbestos disposal area would not be considered "inactive" and (ii) that "it is unknown if the utilities will agree to the provisions in the Environmental Covenant, which requires handling and disposal of all excavated soils that contain ACM off-site in a licensed facility in accordance with the Asbestos Soil Management and Asbestos Health and Safety Plan." For these two reasons, the U.S. EPA proposes creating clean utility corridors. ComEd and JM disagree with these assertions regarding compliance with ARARs.*

U.S. EPA regulations at 40 C.F.R. § 61.141 defines an Inactive Waste Disposal Site as "any disposal site or portion of it where additional asbestos-containing waste material has not been deposited with the past year." It is clear that no ACM has been "deposited" on Site 3 within the past year (the parking area was constructed in the 1950s). The U.S. EPA has, in this case, apparently determined that "disturbance" during a hypothetical future utility excavation is the functional equivalent of "deposit" from a regulatory perspective, without regard to the requirement for any material to be "additional." By stretching the definition of "depositing" to include "disturbing," the U.S. EPA supports its proposal to compel the creation of a "clean corridor" for each utility. However, there is no regulatory basis for this interpretation. The use of a soil cover (commonly known as an "engineered barrier"), whether over a utility or not (i.e., Alternative 2) does not violate ARARs, is entirely appropriate, and is used at thousands of sites across the United States, even where utilities are present.

Response: Under 40 C.F.R. § 61.141, "facility" is defined to include inactive asbestos waste disposal sites and "renovation" is defined to mean altering a facility or one or more facility components in any way. 40 C.F.R. § 61.145 requires removal of all regulated asbestos-containing material from a facility being renovated "before any activity that would break up, dislodge, or similarly disturb the material." Existing easements on the asbestos waste disposal areas of the JM Southwestern Site authorize entry for excavation, maintenance and other activities that could alter the asbestos waste disposal areas. Thus it is relevant and appropriate to remove the ACM along the utility lines prior to such excavation, maintenance and other activity that would break up, dislodge, or similarly disturb the asbestos-containing material. Also, under 40 C.F.R. § 61.151(d), disturbance of a waste disposal site requires notification to U.S. EPA and approval by U.S. EPA of the procedures to be used to control emissions and ultimate disposal of excavated asbestos-containing material.

The title commitment for the Site does not reference any environmental covenants signed by the utilities regarding asbestos at the Site.

7. *Respondents' Comment: The U.S. EPA also opines that Alternative 2 does not comply with ARARs because affected utilities may not comply with Environmental Covenants regarding excavated soil. Environmental Covenants, including those which require management of excavations or, for example, off-site disposal of all wastes in accordance with an Asbestos Soil Management and Asbestos Health and Safety Plan, are legally binding documents. The Respondents agree to inclusion in the Environmental Covenants of a requirement that, if ACM-impacted soil is excavated as part of utility excavations, it will be properly disposed off-site, and the cover restored to its original condition. Therefore, an alternative that incorporates executed covenants does not violate ARARs and is entirely appropriate.*

Response: The chain of title for the Site does not include an environmental covenant that provides for removal of ACM prior to any activity that would break up, dislodge, or similarly disturb the materials at Site 3 and Site 4/5 that is free and clear of prior encumbrances such as the existing utility easements. The need for rapid response to a leaking or damaged utility line exists on Sites 3 and Site 4/5. The need for the responders to don appropriate personal protective equipment will slow down the response and make the work more difficult compared to implementing the removal in a thoughtful and methodical manner now. 40 C.F.R. § 61.145(c) requires removal of all asbestos-containing material before any activity begins that would break up, dislodge, or similarly disturb the material or preclude access to the material for subsequent removal. Cleanup now will avoid problems in the future. Furthermore, institutional controls such as environmental covenants supported by property access systems are only intended to supplement engineering controls, not replace them.

Site 6

8. *Respondents' Comment: The U.S. EPA has posited that the Respondent's preferred alternative for Site 6 does not comply with ARARs (see U.S. EPA revisions to Table 10), principally on the grounds that "the public has unlimited access to the shoulders of Greenwood Ave and, thus this asbestos disposal area is not "inactive" (see U.S. EPA modifications to Section 5.2.1.2). As to the issue of whether or not a disposal site may be considered "inactive," 40 C.F.R.§ 61.141 defines an Inactive Waste Disposal Site as "any disposal site or portion of it where additional asbestos-containing waste material has not been deposited with the past year." While it is clear that no additional ACM has been "deposited" on Site 6 within the past year, the U.S. EPA has, in this case, determined that "disturbance" from snowplows, during a hypothetical future utility excavation or catastrophic vehicle accident that penetrates a two foot cover is the functional equivalent of "deposit" from a regulatory perspective. Therefore, in U.S. EPA's opinion, the site is no longer "inactive" and the soil cover remedies in 40 C.F.R. § 61 and 35 Illinois Administrative Code Part 807 are not available for areas where such "deposition" could occur. By stretching the definition of "depositing" to include "disturbing," the U.S. EPA is then able to compel the removal of all asbestos. The use of a soil cover (commonly known as an "engineered barrier"), whether over a utility or remaining portion of a road shoulder (i.e., Alternative 3) does not violate ARARs, is entirely appropriate, and is used at many sites across the United States. Site 6 is not unique and therefore, unique remedies should not be arbitrarily applied.*

Response: Site 6 is a public right-of-way and is not located on a site under the ownership and control of the Respondents or surrounded by a secured fence with proper warning signs. This makes it unusual compared to the on-site contamination at the JM owned portion of the NPL site and other similar sites. There is no reliable way to prevent access and maintain a vegetated soil cover over the ACM located in Site 6. Any vegetated soil cover and fencing placed at the edge of Greenwood Avenue would be subject to potential damage from vehicles, snow plows, salt trucks, etc. Site 6 presents a unique combination of public right-of-way and utilities that may require time-critical excavation necessary to respond to an emergency situation such as a gas leak or a damaged electrical line would be more likely to result in the potential release of ACM and asbestos fibers. In the event of a breach or other loss of integrity, pressurized underground utilities also have the potential to force overlying soils to the surface resulting in the potential release of ACM and asbestos fibers. See also response to question 10 regarding the requirement to remove all asbestos-containing material before any activity begins that would break up, dislodge, or similarly disturb the material.

9. *Respondents' Comment: U.S. EPA also contends that the "unrestricted access and unrestricted use of the shoulders of Greenwood Avenue would not be in compliance with the use restrictions of 35 IAC 807 and 40 C.F.R.§ 61.141, which require an **undisturbed** (emphasis added) cover on an inactive asbestos disposal area." The Respondents acknowledge that the regulations require that a cover be*

"maintained" (e.g., C.F.R. § 61.151(2) and (3)), but that is not the functional equivalent of "undisturbed." Maintaining a cover would ensure compliance with ARARs and is a simple matter of periodic inspection and repair, as well as replacement of the cover following utility maintenance, as is done at countless sites across the United States.

Response: The general public would not be aware of the requirement of 40 C.F.R. § 60.145(c) to remove ACM prior to activity that would break up, dislodge, or similarly disturb the ACM located on the shoulders of Greenwood Avenue. It would be inappropriate to select a remedy with the expectation that the cover integrity will be breached and patched every time utility maintenance is needed.

ILLINOIS BEACH STATE PARK

Site 3

10. Respondents' Comment: Site 3 is located approximately one mile from Illinois Beach State Park (IBSP), where there is the well documented presence of ACM on the public beach, in a manner and distribution virtually identical to the ACM found at Site 3. In response to the presence of ACM on the public beach, the U.S. EPA conducted activity-based air monitoring in September 2007 to determine whether its presence was potentially harmful to human health. The Agency for Toxic Substances and Disease Registry (ATSDR) reviewed the activity-based sampling results and, in a health consultation report dated March 10, 2009, concluded that recreational use of the beach was not expected to be harmful to human health, despite the presence of the surficial ACM. The ATSDR recommended periodic beach sweeps to remove ACM and to educate users of the IBSP as to the hazards of ACM. U.S. EPA relied on the ATSDR report and is implementing the recommendations as the IBSP remedy.

The limited presence of surficial and subsurface ACM on Site 3 is virtually identical to that found on IBSP, but Site 3 is private property not visited by the general public. Nonetheless, ComEd and JM have proposed a much more protective remedy for Site 3, placing a two-foot thick cover over the entirety of Site 3, virtually precluding any surficial exposure. Moreover, the Respondents would erect fencing with asbestos signage surrounding the site to virtually eliminate casual access by the public. In addition, to protect potential exposure to utility workers, the utility companies who hold easements, would be required to execute an environmental covenant with the Respondents and U.S. EPA requiring that any excavations beneath the cover be conducted in accordance with applicable regulations (e.g., OSHA) and a Soil Management Plan and Asbestos Health and Safety Plan developed specifically for the Site.

The Respondents' EE/CA proposal provides layers of protection against potential exposures on Site 3, which is a private property, unlike the very public Illinois Beach State Park. It is difficult to reconcile allowing unrestricted access on one

site (the public beach) while requiring a two-foot cover, clean utility corridors, and a locked fence at significant cost on a private property.

Response:

As set forth in the Action Memorandum, U.S. EPA has reviewed the alternatives and has concluded that to protect human health and environment the selected alternative for Site 3 is appropriate and meets the criteria under the NCP. The results for studies done at other sites may not be relevant because all environmental conditions and parameters will not be identical at every site.

The IBSP is not an NPL Site and the conditions at IBSP greatly differ from the JM Southwestern Site.

U.S. EPA has conducted assessment work at IBSP. In September 2007, U.S. EPA conducted an "activity-based sampling" study that simulated a variety of recreational activities at IBSP. EPA's project involved the collection of 248 air, 23 microvac and 61 soil samples. Of the 201 air samples analyzed, only 13 contained quantifiable levels of asbestos. Asbestos was not detected in any of the 23 microvac samples, nor was it detected in any of the 61 soil samples. In a draft Health Consultation dated March 10, 2009, ATSDR determined that levels found at IBSP were within or below the EPA target cancer risk range and that recreational use of the IBSP was not expected to harm people's health. U.S. EPA and ATSDR note that pieces of ACM do wash up on IBSP shoreline and both recommend that IDNR continue with regular beach sweeps to remove ACM from the environment and to continue efforts to educate IBSP users about the potential hazards of ACM. The source of the ACM that washes onto the IBSP is unknown at this time. Thus hand removal of ACM that washes onto the beach is the only option available at this time to address the ACM. In March 2007, IDNR removed a potential source of ACM by removing approximately 8,000 tons of ACM contaminated sand from the Feeder Beach at North Point Marina and disposing of it at Zion.

At Sites 3, 4/5 and 6, the EE/CA demonstrates that asbestos in soil samples exceeds 1% in numerous locations. Activity based sampling is not necessary to demonstrate that response action is appropriate at Sites 3, 4/5 and 6. Unlike IBSP, the location of the sources of ACM that may come to the surface at Sites 3, 4/5 and 6 of the Southwestern Site has been identified in the EE/CA. The selected remedy appropriately addresses the source of ACM that is at or may come to the surface at the Southwestern Site.

SAFETY

Site 3

11. Respondents' Comment: The U.S. EPA estimates that approximately 10,000 cubic yards of soil will be excavated and disposed off-site to create the "clean corridors" for each utility. This will result in 1,500 to 2,000 truck trips through the city streets (each truck first arriving empty and then leaving full), thus

creating unnecessary traffic and an increased safety hazard. The Respondents believe that this is an unnecessary risk.

Response: Short-term risks posed by increased truck traffic during excavation activities can be mitigated through proper traffic control plans, ensuring that trucks are properly lined and covered, and applying appropriate health and safety procedures during loading and transport of material.

12. *Respondents' Comment: The Respondents acknowledge that U.S. EPA has indicated that the soil could be used as fill in the Industrial Canal or Pumping Lagoon, thereby eliminating the need for truck traffic to and from the landfill. However, filling of the Industrial Canal and Pumping Lagoon has not been approved by U.S. EPA and that project is highly unlikely to be ready for implementation prior to completion of the Site 3 excavation.*

Response: Comment noted. If use of the fill material for the Industrial Canal and Pumping Lagoon is not feasible, risks related to increased truck traffic can be mitigated as described in the response to Comment 11.

JULIE

Site 3, [Site 4/5, Site 6]

13. *Respondents' Comment: In addition to the proposed environmental covenants with existing utilities, the Respondents will enroll as a voluntary member of the Joint Utility Locating Information for Excavators (JULIE). As such, a map of Site 3 [Site 4/5, Site 6] will be registered on that system. Therefore, if JULIE receives a call requesting a utility locate on or near ACM-affected soil at Site 3[Site 4/5, Site 6], they will notify the Respondents or their designated contractor (a virtually universal [common] practice by utilities such as the easement holders) of the proposed excavation and the Soil Management Plan and Asbestos Health and Safety Plan developed specifically for the Site can then be communicated to the parties. [Using JULIE should eliminate the need for signage in areas where ACM is not known to be present (such as under the paved road surface and other paved areas of Site 6).]*

Response: The signage is considered to be an important element of notification to anybody entering the Site that the utility is located within the soil containing ACM. Also, refer to Comment 5 above.

EMERGENCY EXCAVATIONS

Site 3, [Site 6]

14. *Respondents' Comment: The Respondents believe that the executed covenants with the utilities and the presence of a locked fence and asbestos-signage at the site will prevent so-called "emergency excavations" outside the legal requirements of the existing and proposed environmental covenants. [The Respondents believe that executed covenants with the utilities and the JULIE enrollment will prevent so-called "emergency excavations."] However, should these occur despite efforts to prevent them, the U.S. EPA's activity-based monitoring of virtually identical material on IBSP showed no similar concern for public safety, let alone potential exposure at occupational levels applicable to utility workers. Moreover, occupational air sample results collected by the Respondents from personnel present, adjacent to, and within the excavations during the investigation did not exceed the permissible exposure limit (PEL) for asbestos. Therefore, even if there is an excavation conducted without the benefit of the management requirements in the Soil Management Plan and Asbestos Health and Safety Plan, existing representative air sampling data from the site do not indicate that an unacceptable exposure to utility workers would occur. Thus, existing sample data collected during relevant site activity suggest that a so-called "emergency excavation" would not result in unacceptable worker exposure to asbestos. Further, potential exposure to the public during an emergency excavation is not applicable, as it is not reasonable to assume the public would be present near or within the excavation, especially given the presence of the fence surrounding the site.*

Response: The results for studies done at other sites cannot be used for making decisions for public/utility worker exposure because all environmental conditions and parameters will not be identical at every site. Since the activity based monitoring study has not been done along the utility corridors it cannot be determined if emergency excavations along the utility corridors will be safe. Furthermore, the majority of the utility companies have informed the U.S. EPA that they would want to have clean utility corridor for future maintenance.

GEOTEXTILE

Site 3, [Site 4/5]

15. *Respondents' Comment: The Respondents were also requested to install a geotextile as part of the two-foot thick soil cover. According to the U.S. EPA, six inches of non-asbestos containing sand would be placed on the existing ground surface, followed by the geotextile, atop which would be placed 15 inches of native clayey soil, three inches of topsoil, and a vegetated cover. The geotextile, added to Alternative 2 at U.S. EPA demand, would serve as a visible marker layer*

to delineate the transition downward into the underlying ACM-affected soil. Accordingly, work beneath the marker layer would need to be performed in accordance with the Soil Management Plan and Asbestos Health and Safety Plan. However, installation of the geotextile adds approximately $35,500 [$36,000] in material costs. The Respondents believe a less expensive material, such as plastic construction fence, could be substituted and serve the same function as the geotextile for a much lower cost (approximately $8,300 [$8,000]). U.S. EPA's modifications recognize that the cover design for the Johns Manville site, equal in cover depth to that proposed here but which does NOT include a geotextile, is sufficient to prevent upward migration of ACM due to freeze-thaw cycles.

Response: The geotextile layer provides a visual marker of potential underlying asbestos contamination and thus helps to prevent "accidental over excavation" or disturbance of the underlying contamination. The geotextile layer also provides added protection against the upward movement of large particles, such as broken scraps of asbestos through the soil with each freeze/thaw cycle. The additional protection to the public outweighs the additional cost of the geotextile layer. The geotextile cost is expected to be less than 1% of the total response action cost. The plastic construction fence will not provide equal or greater protection than the geotextile.

SEEDING WITH LITTLE BLUESTEM (*SCHIZACHYRIUM SCOPARIUM*)

Site 3, Site 4/5

16. *Respondents' Comment: To the extent that Little Bluestem thrives on the proposed cover, Respondents have no objection to its use. However, as this species does well in less fertile soil and somewhat drier conditions, the Respondents reserve the right to propose an alternative non-invasive species if (i) use of clay soil for the cover or (ii) highly saturated conditions (e.g., low areas of Site 3) precludes its successful application.*

Response: Comment noted. If requested by U.S. EPA, Respondents shall apply a secondary seeding to provide root growth between the bunch grass for erosion control, thereby potentially reducing maintenance requirements after the excavation work has been completed. If approved by U.S. EPA, other native plant species may need to be added during the secondary seeding to control erosion, but no invasive plants such as crown vetch shall be used.

SCHEDULE

Site 3

17. *Respondents' Comment: The Agreement stipulates that the Respondents will submit a Remedial Action Work Plan within 120 days of receiving U.S. EPA's notice to proceed. Moreover, the Agreement stipulates that the Work Plan will*

provide an "expeditious schedule" for completing the work. While the U.S. EPA acknowledges that their Alternative 5 is "complicated" by the presence of subsurface utilities at Site 3, the Respondents believe that U.S. EPA has vastly underestimated the potential complications and associated impacts to the project schedule. These utilities include telephone, natural gas, fiber optic, water, and electrical lines that serve Midwest Generation and the ComEd substation. Potential service disruptions to the utility and the associated substation are not insignificant "complications," in addition to addressing safety concerns related to working with high voltage electricity (14,000 volts) and high pressure natural gas. These issues will require a significant timeframe to address and will have a material effect on the overall project schedule.

Response: Comment noted. However, U.S. EPA will consider requests for time extensions on a case by case basis.

COST

Site 3

18. *Responents' Comment: According to the U.S. EPA, implementing the U.S. EPA's proposed "clean utility corridors" would result in excavating and handling more than 10,000 cubic yards of ACM-affected soil at an estimated cost of $2,196,000. The Respondents independently estimated the cost of U.S. EPA's Alternative 5 to be approximately $3,438,000. This estimated cost represents an increase of between $1,500,000 and $2,800,000 over the Respondents' proposed alternative without providing a commensurate benefit to human health or the environment, contrary to CERCLA, the NCP and U.S. EPA guidance on the cost effectiveness element of remedy selection. See "Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA" OSWER Directive 9360.0-32, (1993). See also the authorities cited in U.S. EPA's Quick Reference Fact Sheet, "The Role of Cost in the Superfund Remedy Selection Process," OSWER Publication 9200.3-23FS (1996).*

Response: The independent cost estimate determined by the Respondents cannot be verified since the details of the cost estimate were not provided with the comment. Therefore, the appropriateness of the Respondents cost estimate is not known. The cost estimates presented in the proposed plan have been refined and the cost range for the response action has been expanded from that in the proposed plan as additional options including relocating utility lines were added to provide greater flexibility to the parties implementing the response action. For example, response action costs may be reduced for Site 3 by relocating certain utility lines overhead instead of underground or moving them outside of the area and thereby reducing the extent of excavation needed. For more information on these changes and the related costs, please see the detailed cost estimates in the administrative record for this decision. Respondents' initial proposed alternative was not ARAR-compliant because in utility areas Respondents' alternative allowed replacement of asbestos containing material beneath the soil barrier after utility

maintenance instead of removing the asbestos material prior to maintenance and disposing of the asbestos offsite in compliance with the Asbestos NESHAP. Alternative 5 is compliant with ARARs and is more effective than Respondents' initial proposed alternative. Alternative 5 is cost effective and its costs are proportional to its overall effectiveness.

Site 4/5, [Site 6]

19. *Respondents' Comment: The U.S. EPA's cost estimate for Alternative 5 is $1,468,000 [$1,869,000], a substantial increase in cost over Respondents' preferred alternative (Alternative 2 [Alternative 3]), without providing a commensurate benefit to human health or the environment, which is contrary to CERCLA, the NCP and U.S. EPA guidance on the cost effectiveness element of remedy selection. See "Guidance on Conducting Non-Time- Critical Removal Actions Under CERCLA" OSWER Directive 9360.0-32, (1993). See also the authorities cited in U.S. EPA's Quick Reference Fact Sheet, "The Role of Cost in the Superfund Remedy Selection Process," OSWER Publication 9200.3-23FS (1996). The Respondents independently estimated the cost of Alternative 5 to be approximately $1,975,000 [$3,559,000]. This additional incremental cost of between approximately $600,000 and $1,375,000 over Alternative 2 [$1,400,000 and $3,100,000 over Alternative 3] is neither justified nor necessary.*

Response: Refer to response to Comment 18. The cost range for the response action has been expanded from that in the proposed plan as additional options including relocating utility lines were added to provide greater flexibility to the parties implementing the response action. For more information on these changes and the related costs, please see the detailed cost estimates in the administrative record for this decision

Site 4/5

20. *Respondents' Comment: The soil cover in Alternative 2 would be protected from erosion during periods of high water by the rip rap planned for placement along the western embankment of the soil cover. Alternative 2 has the added advantage of being able to maintain the wetlands area at their original extent of 4.09 acres.*

Response: The wet area on the western portion of Sites 4/5 was not previously sampled by Respondents due to standing water in this area of the Sites. Samples collected from grids up to the edge of this wet area contained ACM. Therefore, the probability that the wet area also contains ACM is high and it may become accessible to the public during dry periods. The potential risk of exposure to ACM in this area will be addressed through capping of this area. During the work plan approval process, an appropriate location for wetland restoration will be determined.

COVENANTS

Site 4/5

21. *Respondents' Comment: In Section 3(a)(i) of Attachment 1 to U.S. EPA's letter dated February 1, 2012, the U.S. EPA specified that the Respondents had the option of submitting a fully executed covenant with the NSSD substantially in the form of Appendix N.3 or creating a clean soil corridor for the NSSD sanitary line if the covenant was not submitted within 90 days following U.S. EPA approval of the Removal Action Work Plan (Work Plan). However, Section 5.B and Section 7 of the proposed covenant (Appendix N.3) require the Respondents to create a clean utility corridor by removing asbestos-containing material to create a clean utility corridor for the NSSD sanitary line. Thus, Appendix N.3 provided by U.S. EPA contradicts Section 3(a)(i) of U.S. EPA's letter by requiring installation of a clean utility corridor. The Respondents object to the excavation of ACM-affected soil associated with the NSSD sewer line (as required by the current language in the proposed covenant) as excessive and unnecessary.*

Response: The intent of the proposed plan was to require a clean corridor for the NSSD sanitary line – only the timing of the removal was to be addressed by the environmental covenant to coincide with NSSD's next required maintenance.

22. *Respondents' Comment: Any future breach of the cover to conduct maintenance or repair to the sewer line can be managed in accordance with applicable regulations and the Soil Management Plan and Asbestos Health and Safety Plan in the area of the excavation. If the language in the covenant was not U.S. EPA's intent, the Respondents request that it be modified to reflect such.*

Response: The comment is noted. The Action Memorandum requires that within 180 days following U.S. EPA approval of the Work Plan, Respondents shall excavate soil contaminated with ACM and/or asbestos fibers to a minimum depth of 2 feet below the North Shore Sanitary District Sewer line and a minimum width of 25 feet centered on the utility line and backfill to provide a clean corridor for utility maintenance on Site 4/5. Alternatively, within 180 days following U.S. EPA approval of the Work Plan, Respondents shall construct sanitary sewer lines either outside of, or a minimum of two feet above (using lift stations as necessary), the area contaminated with ACM and/or asbestos fibers to bypass this area. The new sewer lines must be constructed of appropriate materials and have sufficient capacity to replace the existing NSSD sewers, and be properly connected to the NSSD sewer lines to prevent any significant interruption in service. Upon certification that the new sewer lines area is in operation and functional, Respondent shall properly abandon the old sewer lines in place.

23. *Respondents' Comment: As U.S. EPA recognized in the modifications, the sewer line is not likely to have regular maintenance, and the particular estimated date, even if it could be estimated, is of no consequence if the management controls are*

in place in the covenant. Thus, Respondents request the reference in the proposed covenant to a specific date of the next maintenance be removed.

Response: Refer to response to Comment 21 above.

Site 6

24. *Respondents' Comment: Site 6 is owned by the City of Waukegan. The U.S. EPA's position that Alternative 3 does not comply with ARARs is also predicated on U.S. EPA's inconsistently applied opinion that the City of Waukegan's system of managing access to their rights of way is not adequate to address appropriate notice to any party with a planned excavation within Site 6. While U.S. EPA feels that their proposed covenant is adequate to address the area beneath the Greenwood Avenue pavement, they do not apply the same judgment to the shoulders of Greenwood Avenue. It is the Respondent's opinion that the covenant is appropriately applied to both the pavement and the shoulders.*

Response: There is the potential for asbestos to be located under the roadbed, however the paved roadbed has not yet been sampled. The unpaved shoulder area differs from the pavement because sampling has confirmed that asbestos is located in the unpaved shoulder. In addition, U.S. EPA has considered the potential for asbestos to be released from beneath an unusually thick roadbed vs. the roads unpaved shoulder and does not find them to be comparable. The paved surface and built-up roadbed offers more of a deterrent to excavation or unintentional disturbance than the unpaved shoulder. Treating the areas differently is appropriate. Furthermore, institutional controls such as an environmental covenant supported by property access systems are only intended to supplement engineering controls, not replace them.

25. *Respondents' Comment: Alternative 3 does comply with ARARs. To assert without evidence that legally-binding covenants cannot be put in place or enforced presumes that the parties would willfully violate the law. Therefore, an alternative that incorporates executed covenants does not violate ARARs and is entirely appropriate.*

Response: The environmental covenants under Respondents' initial proposed alternative would allow replacement of disturbed asbestos containing material beneath the soil barrier after utility maintenance instead of removing the asbestos material prior to maintenance and disposing of the asbestos containing material offsite prior to disturbance. Respondents' initial proposed environmental covenant is not in compliance with the Asbestos NESHAP. Also, the need for the responders to provide proper decontamination facilities, don appropriate personal protective equipment, etc., will slow down the response and make the work more difficult compared to the same response to repair utilities in clean soils. Furthermore, institutional controls such as restrictive covenants are only intended to supplement engineering controls, not replace them.

COVER AREA

Site 4/5

26. *Respondents' Comment: In Section 3(e) of U.S. EPA's February 1, 2012 letter, the U.S. EPA modified the aerial extent of the soil barrier by adding the requirement to "fill wet areas to allow for cap construction above seasonal high water level to prevent potential erosion in the long term." According to U.S. EPA's revision to Table 5, this results in a 2.7 acre increase in the area of the soil barrier. U.S. EPA justification for this substantial increase is not appropriate, as Alternative 2 had already proposed the use of rip-rap armoring along the western embankment of the soil cover to address potential erosion during periods of high water. Therefore, the Respondents object to the increase in the cover area as unjustified and unnecessary.*

Response: The 2.7 acre area includes the wet area on the west portion of the Sites. This area was not previously sampled by Respondents due to standing water in this area of the Sites. Samples collected from grids up to the edge of this wet area contained ACM. Since the samples collected along the edge of the wet area contained ACM, it is presumed that this wet area also contains ACM that may become accessible to the public during dry periods. The potential risk of exposure to ACM in this area will be addressed through capping of this area.

27. *Respondents' Comment: The increase in cover area to include the "wet areas" may also have a detrimental effect on stormwater drainage. This area conveys stormwater from the City of Waukegan to the Illinois Nature Preserve located to the north of the site (i.e., the reason it is "wet"). The consequences to any changes in the surface elevation of this area (i.e., placement of a two-foot cover in the "wet areas") have not been evaluated with respect to potential erosional impacts to the railroad line or flooding of City of other property located hydraulically upgradient (e.g., west of the railroad line).*

Response: The comment provided by Respondents has been noted. The Removal Action Work Plan will have to address the issues identified about erosional impacts to the railroad line, flooding of properties located hydraulically upgradient and water that is currently conveyed to the nature preserve.

WETLANDS RESTORATION

Site 4/5

28. *Respondents' Comment: In the EE/CA (Revision 4), Alternative 2 included full restoration, post construction, of the current extent of wetlands adjacent to Site 4/5 (4.09 acres). Of concern was the western edge of the soil cover and its potential encroachment into the wetlands. In its Alternative 5, the U.S. EPA has*

proposed putting a soil cover over "wet areas" encompassing 2.7 acres, all of which is assumed to be within the existing wetlands. Yet, the requirement to restore the wetlands to their original 4.09 acres remains in U.S. EPA's Alternative 5. U.S. EPA has not specified how it is possible to restore wetlands when the objective of their additional soil cover in this area is to prevent erosion during periods of high water. Placing a soil cover over wet areas to presumably bring their elevation above standing water in order to avoid erosion is contradictory to maintaining the area as wetlands. As the Respondents already object to the additional soil cover area, restoring the wetlands in the absence of the additional cover is feasible. It is not possible to restore wetlands in an area that is being filled specifically to avoid the presence of standing water. If the additional soil cover is required, the Respondents object to the requirement to restore the wetlands.

Response: The wetlands lost during construction will be restored at the same locations or some other nearby location following the Federal Mitigation Rule. The Federal Mitigation Rule requires that mitigation plans include the same 12 fundamental components: objectives; site selection criteria; site protection instruments (e.g., conservation easements); baseline information (for impact and compensation sites); credit determination methodology; a mitigation work plan; a maintenance plan; ecological performance standards; monitoring requirements; a long-term management plan; an adaptive management plan; and financial assurances. (*Compensatory Mitigation for Losses of Aquatic Resources; Final Rule* 40 C.F.R. § 230.94(c)(2-14)).

PAVED AREA ALONG NORTH SHOULDER OF GREENWOOD AVENUE

Site 6

29. *Respondents' Comment: Regarding the north shoulder of Greenwood Avenue, the U.S. EPA is proposing to require the Respondents to excavate material beneath the paved portion of the shoulder extending from Station 28N to 43N. This area was not required to be investigated by U.S. EPA as part of the Agreement, yet the agency is now requiring remediation without evidence of impact from ACM. The Respondents do not believe the U.S. EPA has provided justification for removal of the paved surface and underlying soil, particularly when the eastern end of this area (i.e., east of Station 43N) did not contain ACM-affected soil. The Respondents assert that the paved surface and underlying soil should be left in place and the paved surface utilized as an "engineered barrier" against potential exposure to asbestos (the presence of which is not even confirmed in this area), a practice used at thousands of sites nationally under various regulatory programs. Moreover, similar to the barrier proposed on the south side of Greenwood adjacent to Site 3, the Respondents believe that the current pavement and annual inspections/repairs, in addition to execution of an environmental covenant (or equivalent) with the City of Waukegan and registering the area with JULIE are appropriate safeguards against planned or emergency excavations.*

Response: The pavement from Station 28N through 43N is not an adequate paved surface to constitute an engineered barrier. Therefore, for the paved surface to serve as an engineered barrier, the paved surface would require either re-paving to restore the integrity of the surface or installation of an engineered barrier and appropriate operation and maintenance requirements.

Response to Comments Received from Mr. Kakuris and Mr. Camplin Illinois on March 12, 2012

1. Mr. Kakuris and Mr. Camplin made several comments related to areas other than the Johns Manville Southwestern Site as follows:

   Comment: The Engineering Evaluation/Cost Analysis must be rejected by the U.S. EPA and a new study must be mandated that properly and adequately identifies the true scope of asbestos waste and microscopic toxic asbestos fiber contamination that exist in areas well beyond those identified in the draft clean-up plan.

   Comment: **Sites Around the Superfund Site Will Remain Contaminated from Flawed U.S. EPA Evaluations & Clean-ups Conducted Over the last 25+ Years. A Complete Re-Evaluation, Site- Wide, is Needed to Ensure the Protection of Public Health!** *The draft clean-up plan has numerous fatal flaws and should be rejected as a remedy that will protect human health from the decades of asbestos pollution in and around the Johns Manville Superfund site.*

   Comment: Not only is the current draft clean-up plan inadequate, but previous evaluations and clean-ups at other sites around the Johns Manville property contain the same fatal flaws.

   Comment: A much more thorough U.S. EPA conducted evaluation is required that doesn't rely upon previously inadequate testing to ensure that the property surrounding the Johns Manville site properly identifies the true scope of areas contaminated from toxic waste originating from the Johns Manville Waukegan operations. There have been too many errors made under the U.S. EPA's watch over the last 25+ years to accurately characterize the full scope of asbestos contamination in and around the Johns Manville Superfund site.

   Comment: Reports relied upon by the U.S. EPA that identified asbestos contamination at sites 3, 4/5, and 6, also identified asbestos in other areas not covered by the draft clean-up plan. All areas known to contain asbestos contamination along the Illinois Lake Michigan shoreline in front of Johns Manville and Midwest Generations in Waukegan must be re-evaluated for the extent of existing asbestos-contamination and the remediation of these sites must be included in the proposed clean-up plan.

Comment: Asbestos contamination from the Johns Manville Superfund site have contaminated the sediments where dredging by ComEd/Midwest Generation has identified the presence of asbestos debris matching the asbestos pollution/debris identified in sites 3, 4/5, and 6. The asbestos contaminated sediments near the Johns Manville site have been dredged and dumped on and off-shore of Illinois Beach State Park. The U.S. EPA conducted activity-based testing in 2007, yet a final report on the findings of airborne exposures to the public from the Superfund asbestos wastes have not been released. A draft report was released in early 2009 and challenge by myself and the Illinois Dunesland Preservation Society charging scientific fraud. The report was resubmitted for a second peer review in 2009 but never finalized. The extensive asbestos contamination on Illinois Beach State Park must be made part of the draft clean-up plan or the CDC/ATSDR public health study from 2007 must be finalized stating the chronic pollution poses no risk to the public. Five years to release a report on asbestos exposure that occurred to visitors of Illinois Beach State Park under the U.S. EPA's watch is bordering on a criminal act. Release the finalized public health study of airborne asbestos exposures your agency and CDC/ATSDR conducted in 2007!

Comment: The U.S. EPA's lack of attention to known areas of asbestos contamination poses an unreasonable risk to human health along the entire Illinois Lake Michigan Shoreline U.S. EPA Intentionally Downplays Asbestos Contamination Found by Others

The U.S. EPA's website (http://www.epa.gov/R5Super/npl/illinois/ILD005443544.html) describes contamination surrounding the Johns Manville site as follows: "Since 1998, seven additional areas, all of which contained asbestos-containing material (ACM) were discovered outside of the Johns-Manville fence line. These areas have been characterized by Johns-Manville." What the U.S. EPA fails to mention is that others outside of the U.S. EPA have identified these sites well after the U.S. EPA had already claimed they were not contaminated. Many of these seven sites were NOT identified by the U.S. EPA. All of these sites were discovered by other studies unrelated to the U.S. EPA's activities. Additional contamination outside of the seven sites has been identified that the U.S. EPA has failed to include in the Superfund evaluation and clean-up. The U.S. EPA's lack of attention to known areas of asbestos contamination poses an unreasonable risk to human health along the entire Illinois Lake Michigan Shoreline.

Comment: Finding #1: The U.S. EPA has continually failed to perform proper site evaluations both in and around the Johns Manville site since they have been responsible for determining the extent of asbestos contamination back in the mid-1980's! A more thorough and comprehensive site evaluation for contamination is necessary to provide confidence in the effectiveness of the proposed clean-up plan to be protective of human health.

Comment: Asbestos contamination is known to be present in areas well beyond the very limited additional clean-up proposed at sites 3, 4/5, and 6. Midwest Generation (formerly owned by Commonwealth Edison) continues to find significant amounts of asbestos contamination when the lake sediments are dredged from the lake water intake and warm water discharge at their site along the Lake Michigan shoreline. The source of the asbestos contamination fits the laboratory "finger print" of Johns Manville pollution found within the U.S. EPA's Superfund site. This same asbestos "finger print" is found in the chronic asbestos pollution that appears on Illinois Beach State Park on a daily basis. The shoreline should be reevaluated and included into the proposed clean-up plan to prevent the continuous spreading of this toxic waste and protect human health.

Comment: Finding #2: A much more thorough U.S. EPA conducted evaluation is required that doesn't rely upon previously inadequate testing to ensure that the property surrounding the Johns Manville site properly identifies the true scope of areas contaminated from toxic waste originating from the Johns Manville Waukegan operations. There have been too many "errors" made under the U.S. EPA's watch over the last 25+ years to accurately characterize the full scope of asbestos contamination in and around the Johns Manville Superfund site.

Comment: The data relied upon to develop the proposed clean-up plan contains fatal flaws that require a more detailed re-evaluation of the extent of asbestos contamination in sites 3, 4/5, 6. In addition, known contamination in other areas under the U.S. EPA's jurisdiction must also be included in the re-evaluation.

The additional sites currently being ignored by the U.S. EPA's faulty clean-up plan includes:

- *Contaminated soils in Site 2;*
- *Contaminated soils, beach sands, and sediments along the Lake Michigan shoreline bordering the Johns Manville and Midwest Generation property;*
- *Contaminated sediments at the discharge pipe (expired NPDES permit) out in Lake Michigan where toxic microscopic asbestos fibers and other toxic pollutants from waste water have improperly discharged into the federal navigable waters in apparent violation of federal and state statutes;*
- *Contaminated beach sand and sediments from past and CONTINUED dredging and dumping of asbestos-contaminated sediments along the Illinois Lake Michigan shoreline.*

Comment Finding #7: All areas known to contain asbestos contamination along the Illinois Lake Michigan shoreline in front of Johns Manville and Midwest Generations in Waukegan must be re-evaluated for the extent of existing asbestos- contamination and the remediation of these sites must be included in the proposed clean-up plan.

Comment: **U.S. EPA Ignores Known Contamination Impacting Lake Michigan Shoreline** *Asbestos waste and microscopic asbestos contamination from the Johns Manville Superfund site has been spread up and down the Illinois Lake Michigan shoreline by dredging operations by Commonwealth Edison, Midwest Generation, the Army Corps of Engineers, and the Illinois Department of Natural Resources. The spreading of this contamination has occurred under the observation and acknowledgement of the Illinois Attorney General.*

The continued dredging and dumping of asbestos-contaminated sediments has impacted public health from the Illinois-Wisconsin border/Illinois Beach State Park/Waukegan, down to northshore communities such as Lake Forest and Highland Park, and further along to Chicago's Oak Street beach. The existing contamination that is currently being ignored by the U.S. EPA and State of Illinois must be evaluated and included in the proposed clean-up plan. The current testing performed on Lake Michigan sediments is not risk-based. The sediments were polluted from the Johns Manville asbestos discharges into Lake Michigan and must be evaluated by the U.S. EPA as potential new clean-up sites.

Comment: Finding #8: The U.S. EPA must perform evaluations to determine the extent of Johns Manville asbestos pollution known to have polluted shoreline sediments along the entire Illinois Lake Michigan shoreline that are continually spread through annual dredging operations. Past and current testing and evaluations performed and/or mandated by the State of Illinois are not able to demonstrate levels of the current toxic microscopic asbestos fiber contamination in these sediments do not pose an unreasonable risk to human health. The misleading testing required by the State of Illinois does not exempt the U.S. EPA from its responsibilities to evaluate the shorelines for Superfund clean-up consideration.

Response: The Action Memorandum addresses the JM Southwestern Site (Sites 3, 4/5 and 6 in Attachment A to the Action Memorandum) but does not address areas outside of the Southwestern Site such as the Illinois Beach State Park, JM-owned portion of the NPL Site or other areas noted in Mr. Kakuris and Mr. Camplin's comments. U.S. EPA wishes to move forward now, rather than further delaying completion of the cleanup on the Southwestern Site. Although not addressed by this Action Memorandum, the U.S. EPA and/or the State of Illinois has investigated and conducted certain response actions or are currently investigating areas near the Southwestern Site. Nothing in the Action Memorandum or the Administrative Order on Consent prevents U.S. EPA from taking response actions at any area near the Southwestern Site.

2. *Mr. Kakuris and Mr. Camplin made several comments critical of the type of sampling conducted in the EE/CA. Mr. Kakuris and Mr. Camplin would like additional sampling information to characterize the risk at the Southwestern Site. These Comments are as follows:*

Comment: The sampling and analytical methodologies required to determine the scope and extent of contamination must utilize clean-up objectives that are risk-based and protective of human health.

Comment: Asbestos is an airborne hazard and the site evaluations did not include any air testing to evaluate exposures where asbestos contaminated soils were below the clean-up objective.

Comment: The clean-up plan relies solely upon inadequate soil testing along with smoke and mirrors to give the illusion the 40 years of toxic pollution in these sites will not pose a risk to the community or workers.

Comment: Appendix A has an U.S. EPA memo requiring clean-up objectives for asbestos clean-ups to be risk based. The draft clean-up plan contains fatally flawed clean-up objectives.

Comment: The testing utilized as the basis for the Engineering Evaluation/Cost Estimate did not accurately define a scope of work due to improper testing, lack of a risk based clean-up objective, and reliance on assumptions that past testing was accurate.

Comment: Fatal flaws exist in the testing and analytical methods relied upon in the draft clean-up plan that require a complete re-evaluation of the site to ensure the clean-up is protective of human health.

Response: U.S. EPA has determined that there is sufficient information on which to determine that response action should be undertaken at all areas of Sites 3, 4/5 and 6 of the Southwestern Site. Further efforts to characterize the Southwestern Site or potential airborne exposures before response action is taken are not required, but may be conducted to facilitate the design and/or construction of the response action. Existing data indicates that sufficiently high levels of asbestos are present at the Southwestern Site to warrant response action at Sites 3, 4/5 and 6.

3. *Mr. Kakuris and Mr. Camplin had comments based on the belief that 0.25% asbestos in soil is the cleanup objective for the Southwestern Site. Mr. Kakuris and Mr. Camplin also had comments based on the belief that certain areas of the Sites 3, 4/5 and 6 were excluded by the proposed plan. These comments are as follows:*

Comment: The proposed clean-up plan currently utilizes sampling, testing and clean-up objectives that are not able to demonstrate the clean-up is protective of human health.

Comment: Sampling methodologies allow microscopic toxic asbestos fibers in soil to be diluted below analytical detection levels resulting in the asbestos contaminated soils being excluded from the clean-up plan. The dilution of soil

sample results poses an unreasonable risk to human health. Sampling methodologies utilized to determine whether asbestos is present in soils allow for significant dilution of samples well below the inadequate detection levels. Composite sampling in one foot depths results in significant dilution of microscopic asbestos fibers that may be present in surface soils. Soils contaminated on the surface with toxic microscopic asbestos fiber concentrations above clean-up objectives of 0.25% would be reported as "non-detect" for the presence of asbestos when mixed (diluted) with 12" of asbestos-free soil. This fatal flaw results in soils contaminated with toxic microscopic asbestos fibers to be reported as "non-detect" and excluded from the clean-up plan posing an unreasonable risk to human health.

Comment: The analytical (laboratory) methods selected for determining the presence of microscopic toxic asbestos fibers in soils utilized a minimum detection level 2500% higher than what could actually be detected by the laboratory. This fatal flaw results in asbestos contaminated soils being excluded from the clean-up plan and poses an unreasonable risk to human health. The testing method for soil states it can accurately determine the presence of microscopic toxic asbestos fibers in soils down to 0.25%. However, the lab used to analyze the soil samples indicates that they have the ability to accurately report soil results to concentrations less than 0.01%. The draft clean-up plan utilized a sensitivity level of 0.25% which allowed for significantly diluted soil samples (discussed in #1 [#11] above) to have the analytical sensitivity reporting levels diluted as well. This fatal flaw results in soils that have significant surface contamination of toxic microscopic asbestos fibers to be excluded from the clean-up plan posing an unreasonable risk to human health.

Comment: The clean-up objective in the draft clean-up plan (0.25% asbestos) has not been demonstrated as a site specific, risk based criteria that is protective of human health. The use of a flawed clean-up objective violates Superfund requirements and will exclude soils contaminated with toxic microscopic asbestos fibers diluted below the clean-up objective (see #1 [#11] and #2 [#12] above). The omission of asbestos contaminated soils in the draft clean-up plan poses an unreasonable risk to human health. The U.S. EPA requires that remedies to Superfund clean-ups demonstrate that they are protective of human health. The clean-up objective selected by the U.S. EPA for the draft clean-up plan has not been evaluated using site specific, risk- based methodologies and cannot be demonstrated to be protective of human health. There are numerous areas that had detectable levels of asbestos that were below the clean-up objective. These soils contaminated with microscopic toxic asbestos fibers would be excluded from the clean-up plan even though they could still pose an unreasonable risk to human health. Furthermore, sampling and analytical methods used to evaluate the soils significantly diluted the reporting of microscopic toxic asbestos fibers that could be present in surface soils (see #1 [#11] and #2 [#12] above). A much larger scope of clean-up would be required if more sensitive sampling and analytical methods were used in combination with a risk-based clean-up

objective. The fatal flaw of selecting a clean-up objective that is not risk based is a violation of Superfund resulting in a clean-up that is not protective of human health.

Comment: The flawed sampling, analytical, and clean-up objectives established as the foundation for the draft clean-up plan significantly dilutes the true amounts of asbestos contamination found in the sites soil, including the more virulent amphibole asbestos crocidolite. Amphibole asbestos is more harmful to human health. The severe diluting of soil samples coupled with analytical methods with improper detection levels minimizes and downplays the significant impact on human health posed by the more harmful microscopic amphibole asbestos fibers. The production of several materials at the Johns Manville asbestos plan in Waukegan utilized a rare type of asbestos fiber from Africa that is extremely potent to human health. Crocidolite, the blue asbestos, has been estimated by some risk based studies to be 500 times more potent to human health than the more common chrysotile asbestos. There were some sample test sites in Engineering Evaluation/Cost Estimate performed by Johns Manville that had detectable amounts of crocidolite that were not included in the draft clean-up plan. In addition, the significant dilution of soil samples combined with laboratory sensitivities that were 2500% higher than what the labs could actually detect, resulted in soils potentially contaminated with the more harmful crocidolite asbestos being labeled as "non-detect" for asbestos. The presence of crocidolite asbestos in soils significantly increases the risk to human health. The sampling, analytical, and clean-up objectives used as the basis for the draft clean-up plan allows crocidolite asbestos to be diluted below clean-up objective levels or the less sensitive laboratory detection levels. Improper identification of the rare, but extremely toxic crocidolite asbestos, results in a clean-up that is not protective of human health.

Comment: Soil samples that were found to contain toxic microscopic asbestos fibers below the 0.25% clean-up can still pose an unreasonable risk to human health, yet are ignored in the draft clean-up plan. Toxic microscopic asbestos fibers, including the more virulent crocidolite asbestos, will remain in soil as a pose an unreasonable risk to human health. The percentage of asbestos in the sample results obtained by visual estimation, point-counting, and by weight, do not evaluate the airborne risk of the fibers that were detected in numerous samples below the clean-up objective. Therefore, the soil samples found to contain any level of toxic microscopic asbestos fibers can still pose a risk to human health and must be included in a revised clean-up plan until a risk-based clean- up objective can be established. Even with the severe fatal flaws in the sampling and analytical methods outlined in the points above, there are numerous samples taken from soil that were found to contain toxic microscopic asbestos fibers. More disturbing is the finding that the more virulent asbestos, crocidolite, is present in many of those samples (see Appendix B for examples). The quantity of asbestos in soil has nothing to do with the airborne exposure to human health once the soils are disturbed. Therefore, any soils that contain toxic

microscopic asbestos fibers in concentrations at 0.25% or less are currently omitted from the clean-up plan even though they can still pose an unreasonable risk to human health. Air sampling and risk assessments are required to establish a clean-up objective that is protective of human health. The Engineering Evaluation/Cost Estimates provided by Johns Manville does not provide any risk based evidence that would allow asbestos contaminated soils, below the err ridden clean-up objective, to be ignored in the draft clean-up plan. All soils with detectable levels of asbestos must be included in the draft clean-up plan until risk-based clean-up objectives are established.

Comment: The U.S. EPA must require Johns Manville to provide current re-evaluations of each site using the most thorough investigation, sampling, testing, and analytical methods that accurately quantify the extent of contamination. The areas determine not to be contaminated must be verified to be clean to a level protective of human health. All clean-up objectives must be demonstrated to be protective of human health. Currently no such standard exists in this U.S. EPA proposed clean-up plan

Comment: The U.S. EPA's clean-up objective of 0.25% is not risk-based and cannot be used as the basis of the proposed clean-up plan at sites 3, 4/5, and 6. Multiple soil samples contained detectable levels of asbestos below the clean-up objective. There is no risk-based data provided to demonstrate that detectable levels of asbestos fibers in soil do not pose an unreasonable risk to human health. New soil and air sampling utilizing more accurate analytical methods is required to properly characterize a cleanup that is protective of health. Air testing is mandatory to evaluate an airborne hazard.

Comment: Johns Manville Engineering Study Erroneously "Assumes" Past Testing is Accurate and Can Be Used to Exclude Contaminated Areas from Clean-Up.

The Engineering Evaluation/Cost Analysis prepared by Johns Manville relies upon older testing results and makes assumptions that significantly reduce the scope of the clean-up required by their plan. The Johns Manville Engineering Evaluation/Cost Analysis relied upon testing from others and assumes it is accurate. For example, the report states on page 19, "Previously completed grid sampling characterization of Site 3 is assumed to have determined the horizontal extent of ACM-impacted soils." There should be no assumptions about the absence of contamination based on previously flawed studies. All areas that are currently "assumed" to be non-contaminated must be re-evaluated utilizing clean-up objectives and sampling techniques that demonstrate the clean-up objectives are protective of human health. The previous studies relied upon to determine the extent of contamination do not contain scientifically accepted protocols and standards that demonstrated to be protective of human health. The past defective and limited studies contained fatal flaws in excess of what is

discussed in this letter. Past limited and flawed studies should not be allowed to be used to exclude areas from the draft clean-up plan.

Comment: Finding #3: The U.S. EPA must require Johns Manville to provide current re- evaluations of each site using the most thorough investigation, sampling, testing, and analytical methods that accurately quantify the extent of contamination. The areas determined by Johns Manville not to be contaminated with microscopic toxic asbestos fibers must be verified to be clean to a level protective of human health. All clean-up objectives must be demonstrated to be protective of human health. Currently no such standard exists in this U.S. EPA proposed clean-up plan. Therefore, the draft clean-up plan is fatally flawed and does not support its conclusion that it is protective of human health.

Comment: The clean-up objective of 0.25% asbestos detected is not risk-based and cannot be demonstrated to be protective of public health. Other available analytical methods used to test soils for the presence of asbestos measure for concentrations well below 0.25%. Additionally, no risk based air sampling was performed to establish clean-up objectives that are protective of human health.

Comment: Finding #4: The U.S. EPA's clean-up objective of 0.25% is not risk-based and cannot be used as the basis of the proposed clean-up plan at sites 3, 4/5, and 6. Multiple soil samples contained detectable levels of asbestos below the clean-up objective. There is no risk-based data provided to demonstrate that detectable levels of toxic microscopic asbestos fibers in soil do not pose an unreasonable risk to human health. New soil and air sampling utilizing more accurate analytical methods is required to properly characterize a cleanup that is protective of health. Proper, scientifically-base air testing using accepted protocols is mandatory to evaluate an airborne asbestos hazard!

Response:

All areas of Sites 3, 4/5 and 6 are addressed by the cleanup plan. No areas of Sites 3, 4/5 or 6 are excluded based solely on sampling results below the PLM detection limit in the EE/CA. A cleanup level of 0.25% asbestos is not the cleanup objective for the Southwestern Site. After completion of the remedy, all areas of Sites 3 and 4/5 where asbestos containing materials or asbestos fibers remain in place will have a clean cover. On Site 6, the area noted on Figure 13 of the EE/CA will be excavated and removed and replaced with a clean cover. Certain areas of Site 6 were shown to be below the asbestos detection limit using PLM. The cleanup plan requires confirmation sampling and analysis of these non-detect areas on Site 6 to confirm that these areas do not present a risk to human health and the environment from asbestos fibers releasable to the air. U.S. EPA believes that the selected remedy is protective of the human health and environment. The remedies include either removal of all asbestos containing material and/or a cover to mitigate exposure to asbestos-containing soil.

4. Other Comments

Comment: The U.S. EPA must also provide significant clarification of misleading wording and terms used by Johns Manville to minimize and distort the extent of asbestos contamination identified in the flawed cleanup plan for sites 3, 4/5, and 6.

Response: The misleading wording and terms used by Johns Manville have not been provided by the author of this comment, therefore, no response is provided.

Comment: Johns Manville's Report Deceptively Uses Wording to Downplay Contamination *The Engineering Evaluation/Cost Analysis (Arcadis, April 4, 2011) prepared by Johns Manville's consultant uses vague descriptions of what asbestos contamination was found to develop an inadequate clean-up plan that does not demonstrate it is protective of public health. The report is riddled with undefined terms that misrepresent the toxic pollution found in soil. Some of the terminology appears to be used interchangeably in some areas and for specific uses in other areas. Terms noted that do not have a clear definitions in the clean-up plan include "asbestos", "presence of asbestos", "presence of ACM", "ACM not present above the clean-up objective", "detected but below the "ACM-affected soil", "soil affected by ACM", "asbestos-impacted soil", "asbestos-affected soil", "asbestos-affected soil/debris", and "asbestos-affected debris/soil".*

Response: The language that is the subject of this comment is taken out of context. In context of the EE/CA the presented information is understandable.

Comment: The soil is clearly polluted with asbestos, not "affected by asbestos". The citizen's and worker's health are affected by the asbestos polluted soil. The Johns Manville Engineering Evaluation/Cost Analysis that was conducted using a flawed clean-up object of 0.25%, further misuses invented, undefined, and misleading terms to downplay their inappropriate evaluation of asbestos pollution at these sites. Clarification of terms to describe contaminated vs. non-contaminated soils must be provided by the U.S. EPA before a reasonable public evaluation of the Engineering Evaluation/Cost Analysis can be made.

Response: The terms "polluted with asbestos" and "affected with asbestos" are meant to refer to the same conditions.

ATTACHMENT H

ENFORCEMENT CONFIDENTIAL MEMORANDUM

TWO PAGES

NOT RELEVANT TO SELECTION OF REMOVAL ACTION

ATTACHMENT I

ADMINISTRATIVE RECORD INDEX

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ADMINISTRATIVE RECORD
FOR
JOHNS-MANVILLE SOUTHWESTERN SITE AREA
INCLUDING SITES 3,4,5,6
WAUKEGAN, ILLINOIS

ORIGINAL
DECEMBER 11, 2006

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
1	04//20/98-07/22/02	U.S. EPA	Public	Administrative Record Documents for the Johns-Manville Additional Sites 2 and 3, Original and Updates 1-3 **(DOCUMENTS INCLUDED BY REFERENCE)**	
2	12/10/99	ELM Consulting, LLC	U.S. EPA	Surface and Subsurface Characterization for Site 2 and Site 3 for the Former Johns Manville Manufacturing Facility Volume 1, Appendices A-K (DRAFT)	519
3	12/10/99	ELM Consulting, LLC	U.S. EPA	Surface and Subsurface Characterization for Site 2 and Site 3 for the Former Johns-Manville Manufacturing Facility Volume 2, Appendix L Figures 1-30 (DRAFT)	33
4	07/16/01	O'Tool, M., ComEd	Rafati, M., U.S. EPA	104(e) Response to Information Request re: The Johns Manville Site (Site 4)	17
5	01/30/02	Clinton, W., Johns Manville	Rafati, M., U.S. EPA	104(e) Response to Information Request re: The Johns Manville Site (Site 4)	28
6	03/07/02	Berman, W., Aeolus, Inc.	Waukegan Park District	Waukegan Park District: An Evaluation of Offsite Asbestos and Air Pollutants and Their Potential Effect on Visitors to the Proposed Sports Complex in Waukegan w/Cover Letter	42

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ADMINISTRATIVE RECORD
FOR
JOHNS-MANVILLE SOUTHWESTERN SITE AREA
INCLUDING SITES 3,4/5 AND 6
WAUKEGAN, ILLINOIS

UPDATE #1
FEBRUARY 7, 2012

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
1	02/01/12	Ohl, M., U.S. EPA	Clinton, D., Johns Manville	Letter re: U.S. EPA's Modification to the April 4, 2011 Engineering Evaluation Cost Analysis Report w/Attachments **(SDMS ID: 420444)**	109
2	02/01/54	Commonwealth Edison Company	Northern Illinois Gas Company	Joint Use of Property Between Commonwealth Edison Company and Northern Illinois Gas Company **(PROVIDED ON OCT. 31, 2011 AS AN ADDENDUM TO THE APRIL 4, 2011 EE/CA FOR THE SOUTHWESTERN SITE AREA SITES 3, 4/5 AND 6/SDMS ID: 420445)**	17
3	11/27/71	Commonwealth Edison Company	North Shore Gas Company	Supplemental Easement Agreement Between Commonwealth Edison Company and North Shore Gas Company **(PROVIDED ON OCT. 31, 2011 AS AN ADDENDUM TO THE APRIL 4, 2011 EE/CA FOR THE SOUTHWESTERN SITE AREA SITES 3, 4/5 AND 6/SDMS ID: 420446)**	13
4	06/20/87-04/05/05	U.S. EPA	Public	Administrative Record Documents for the Johns-Manville Site, Original and all Updates **(DOCUMENTS ARE INCLUDED BY REFERENCE NOT COPIED FOR PHYSICAL INCLUSION)**	
5	04//20/98-12/11/06	U.S. EPA	Public	Administrative Record Documents for the Johns-Manville Additional Sites 2 and 3, Original and Updates 1-3 and Johns-Manville Southwestern Site Area, Original **(DOCUMENTS ARE INCLUDED BY REFERENCE NOT COPIED FOR PHYSICAL INCLUSION)**	

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
6	06/11/07	Karl, R., U.S. EPA	Respondents	Administrative Settlement Agreement and Order on Consent for Removal Action (V-W-'07-C-870) w/Cover Letter **(SDMS ID: 276017)**	37
7	04/04/11	Johns Manville & Commonwealth Edison Company	U.S. EPA	Engineering Evaluation/ Cost Analysis (EE/CA), Revision 4; Southwestern Site Area Sites 3, 4/5 and 6 with Cover Letter **(SDMS ID: 410081)**	720

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ADMINISTRATIVE RECORD INDEX
FOR
JOHNS-MANVILLE SOUTHWESTERN SITE AREA
INCLUDING SITES 3,4,5,6
WAUKEGAN, ILLINOIS

UPDATE #2
JUNE 2012

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
1	05/00/94	U.S. EPA/ OSWER	U.S. EPA	Guidance: Considering Wetlands at CERCLA Sites (Publication 9280.0-03) **(SDMS ID: 430475)**	46
2	08/10/04	Cook, M., U.S. EPA	Superfund National Policy Managers, Regions 1-10	Memorandum re: Clarifying Cleanup Goals and Identification of New Assessment Tools for Evaluating Asbestos at Superfund Cleanups (Appendix B - 1% Memo) **(SDMS ID: 437056)**	4
3	09/00/08	U.S. EPA/ OSWER	U.S. EPA	Guidance: Framework for Investigating Asbestos-Contaminated Superfund Sites (OSWER Directive 9200.0-68) **(SDMS ID: 430467)**	71
4 Notice: 1	02/09/12	Lake County News-Sun	Public	U.S. EPA Public Announcement of February 10-March 12, 2012 Public Comment Period and February 22, 2012 Open House **(SDMS ID: 430469)**	
5	02/22/12	Wilson, D., CAG	U.S. EPA	Public Comment Sheet re: Comments on Proposed Cleanup Plan for the Johns-Manville Superfund Site **(SDMS ID: 430469)**	1
6	03/09/12	Pierce, D., North Shore Sanitary District	Joyce, M., U.S. EPA	Letter re: Public Comment on the Johns Manville Cleanup Site **(SDMS ID: 430470)**	2
7	03/12/12	Bow, W., AECOM	Ohl, M., U.S. EPA	Letter re: Respondents Response Documents to Engineering Evaluation/ Cost Analysis (EE/CA), Revision 4, as Modified and Approved by U.S. EPA for the Southwestern Site Area **(SDMS ID: 430471)**	15

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
8	03/12/12	Camplin, J.,	Joyce, M.,	Letter re: Public	19
		CSP	U.S. EPA	Comments on the Flawed EPA Oversight for the Johns Manville Proposed Cleanup Plan for Superfund Sites 3,4,5,6 **(SDMS ID: 430472)**	
9	03/12/12	Concerned Citizens	U.S. EPA	E-Mail Transmissions re: Three Public Comments Received February 21-March 13, 2012 on the Proposed Cleanup Plan for the Johns-Manville **Site (PORTIONS OF THIS DOCUMENT HAVE BEEN REDACTED/ SDMS ID: 436995)**	6
10	03/12/12	Kakuris, P.,	Joyce, M.,	Letter re: Public	21
		Illinois Dunesland Preservation Society	U.S. EPA	Comments on the Flawed EPA Oversight for the Johns Manville Proposed Cleanup Plan for Superfund Sites 3,4,5,6 **(SDMS ID: 436996)**	
11	06/13/12			Excel Spread Sheet re: Cost Estimates for Eastern and Western Sanitary Sewers Relocations **(SDMS ID: 437055)**	

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ADMINISTRATIVE RECORD INDEX
FOR
JOHNS-MANVILLE SOUTHWESTERN SITE AREA
INCLUDING SITES 3,4,5,6
WAUKEGAN, ILLINOIS

UPDATE #3
JULY 5, 2012
(SDMS ID: 424335)

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
1	06/04/12	Weston Solutions Inc.	U.S. EPA	Excel Spreadsheet re: Sites 4/5 Comparative Alternatives Clean Corridor **(SDMS ID: 424334)**	

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ADMINISTRATIVE RECORD
FOR
JOHNS MANVILLE SOUTHWESTERN SITE AREA
INCLUDING SITES 3,4,5,6
WAUKEGAN, ILLINOIS

UPDATE #4
NOVEMBER 8, 2012

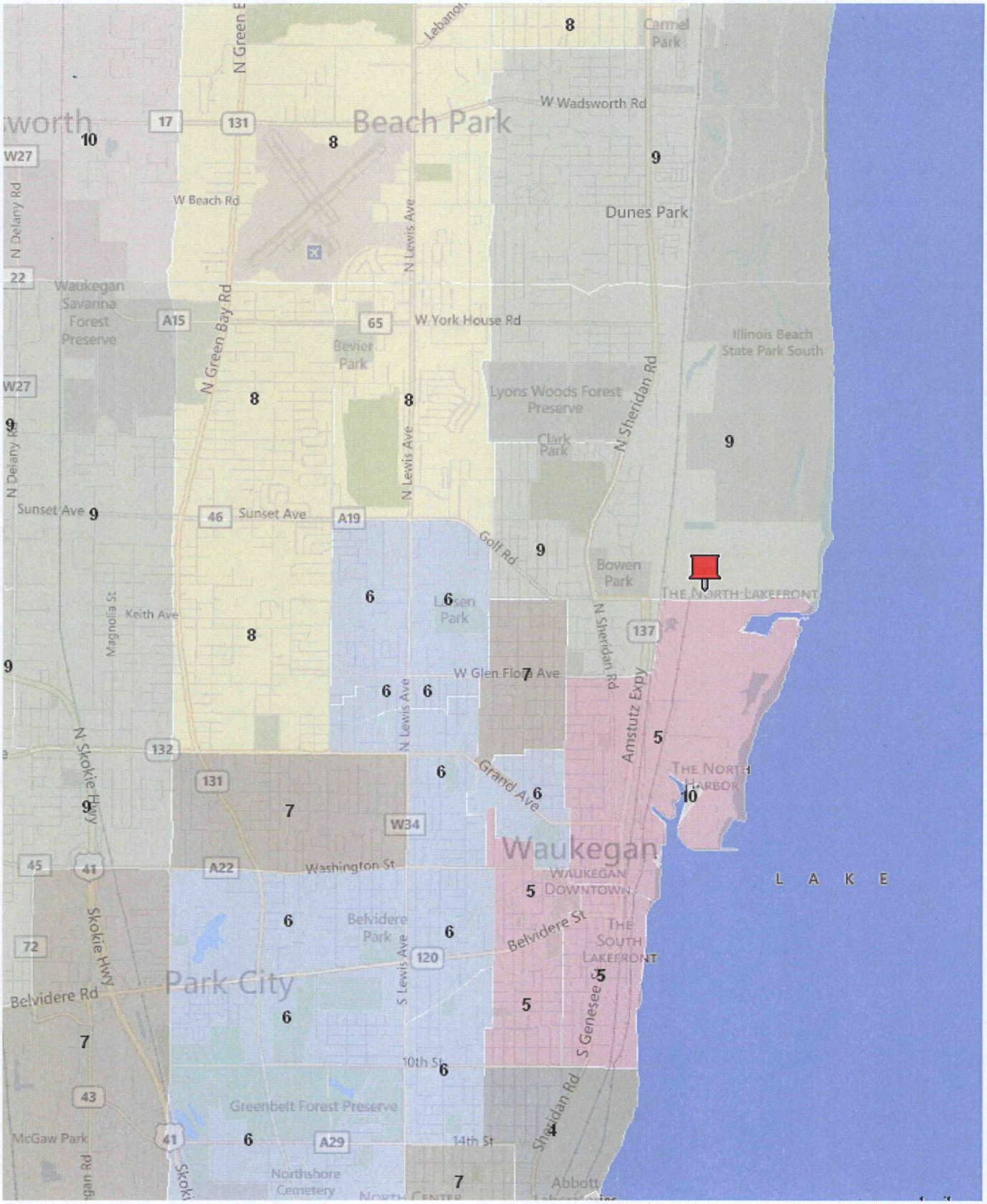
NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
1	10/22/12	Weston Solutions, Inc.	U.S. EPA	Johns Manville Southwestern Site Area Enforcement Action Memorandum Cost Estimates	14

ATTACHMENT J

REGION 5 SUPERFUND EJ ANALYSIS

SOUTHWESTERN SITE AREA
WAUKEGAN, LAKE COUNTY, ILLINOIS

CERCLIS Site ID# 05A5



Overview

Total Persons:	3488	Land Area:	98.8%	Households in Area:	1317
Population Density:	1294.39 /sq mi	Water Area:	1.2%	Housing Units in Area:	1375
Percent Minority:	39.6%	Persons Below Poverty Level:	201 (5.8%)	Households on Public Assistance:	28
Percent Urban:	100%	Housing Units Built <1970:	78%	Housing Units Built <1950:	27%

Race and Age*

Race Breakdown	Persons (%)	Age Breakdown	Persons(%)
White:	2432 (69.7%)	Child 5 years or less:	287 (8.2%)
African-American:	470 (13.5%)	Minors 17 years and younger:	902 (25.9%)
Hispanic-Origin:	834 (23.9%)	Adults 18 years and older:	2586 (74.1%)
Asian/Pacific Islander:	23 (0.7%)	Seniors 65 years and older:	451 (12.9%)
American Indian:	3 (0.1%)	*This space intentionally left blank*	
Other Race:	441 (12.7%)		
Multiracial:	118 (3.4%)		

(* Columns that add up to 100% are highlighted)

Gender

Gender Breakdown	Persons (%)
Males:	1697 (48.7%)
Females:	1791 (51.3%)

Education

Education Level (Persons 25 & older)	Persons (%)
Less than 9th grade:	159 (7.4%)
9th -12th grade:	208 (9.7%)
High School Diploma:	643 (30.0%)
Some College/2 yr:	522 (24.4%)
B.S./B.A. or more:	611 (28.5%)

Language

Ability to Speak English	Persons (%)
Population Age 5 and Over:	3244
Speak only English:	2411 (74.3%)
Non-English at Home:	834 (25.7%)
Speak English very well:	469 (14.5%)

Speak English well:	178 (5.5%)
Speak English not well:	93 (2.9%)
Speak English not at all:	94 (2.9%)
Speak English less than well:	187 (5.8%)

Income

Income Breakdown	Households (%)
Less than $15,000:	93 (7.0%)
$15,000 - $25,000:	135 (10.3%)
$25,000 - $50,000:	347 (26.4%)
$50,000 - $75,000:	289 (21.9%)
Greater than $75,000:	434 (32.9%)

Tenure

Tenure Breakdown	Households (%)
Occupied Housing Units:	1317 (100.0%)
Owner Occupied:	1033 (78.4%)
Renter Occupied	284 (21.6%)

County and State Comparison

Overview

	Study Area	LAKE County, IL	ILLINOIS
Total Persons:	3488	644356	12419293
Population Density:	1294.39 /sq mi	1439.7 /sq mi	223.43 /sq mi
Percent Minority:	39.6%	26.6%	32.2%
Persons Below Poverty Level:	201 (5.8%)	35714 (5.7%)	1291958 (10.7%)
Households in Area:	1317	216297	4591779
Households on Public Assistance:	28	3391	152667
Housing Units Built <1970:	78%	41%	62%
Housing Units Built <1950:	27%	15%	32%

Race

Race Breakdown	Study Area		LAKE County, IL		ILLINOIS	
White:	2432	(69.7%)	516179	(80.1%)	9123564	(73.5%)
African-American:	470	(13.5%)	43614	(6.8%)	1864619	(15.0%)
Hispanic-Origin:	834	(23.9%)	93075	(14.4%)	1529141	(12.3%)
Asian/Pacific Islander:	23	(0.7%)	25305	(3.9%)	423440	(3.4%)
American Indian:	3	(0.1%)	1553	(0.2%)	30407	(0.2%)
Other Race:	441	(12.7%)	44076	(6.8%)	724021	(5.8%)
Multiracial:	118	(3.4%)	13267	(2.1%)	249431	(2.0%)
(* Columns that add up to 100% are highlighted)						

Statistics represent residential population, by Census Block Group, within a 1 mile buffer around feature of interest: